

# OFFICE MANAGEMENT

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REVISED AND ENLARGED EDITION

NEW YORK  
PRENTICE-HALL, INC.

1945

## Preface

IN THE ten years since the first edition of this book was published, office management may fairly be said to have come into its own and to have won acceptance as an essential and productive function in virtually all business organizations. No longer is the office manager merely a glorified clerk, or a convenient person to whom is shifted the responsibility for a miscellaneous assortment of minor tasks and duties with which no one else wants to bother. The office manager is now recognized as an executive and the head of a department as important to the success of the company as are the finance, the sales, and the production departments. To be sure, much remains to be done in order that the office manager may secure everywhere the status that the importance of his work warrants. In the last decade, however, very substantial progress has been made in that direction.

*Office Management* covers both principles and methods. While this edition, of course, deals with the same basic subjects that were covered in the first edition, the material has been thoroughly and completely revised. A very considerable amount of new material has been added, notably many practical illustrations of specific procedures and methods used by representative companies. This book should thus be equally valuable to business executives, to office managers, to teachers, and to students.

The choice of the subject matter of the various chapters has been determined in every case by the relation that the office manager holds, in everyday practice, to the particular matter in hand. For example, while the organization, work, and methods of the stenographic, filing, mailing, and mes-



senger departments are covered in considerable detail, the chapters dealing with the work of the business departments treat primarily with the phases of the work of the departments in which the office manager has some functional interest, such as record-keeping methods and personnel.

Because of the extremely close relation existing between many of the subjects discussed, specific references are not given for each chapter. Instead, a condensed bibliography of books, magazines, and other material on the subject of office management as a whole is given after the last chapter.

In dealing with a field in which so much practical work has been done in recent years, and on which such a wealth of literature has appeared, it is impossible to give credit to all who have contributed helpfully to the making of this book. Particular acknowledgment, however, is due to the National Office Management Association, to the American Management Association, and to the Life Office Management Association; to Mr. C. W. Simpson, Sales Promotion Manager of the Art Metal Construction Company and editor of *The Office Economist*, who generously permitted the use of certain material that has appeared in *The Office Economist*; to the McGraw-Hill Publishing Company and to other publishers for the use of material published by them; to the Policyholders Service Bureau of the Metropolitan Life Insurance Company; and to the various manufacturers of office machines and appliances who kindly provided illustrations of their equipment.

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NEW YORK

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## CHAPTER I

### *The Profession of Office Management*

**Scope of the office manager's responsibility.** Perhaps no other single position in a business organization carries with it such a variety of responsibilities as that of the office manager. In some cases, particularly in small companies, he is often responsible for the accounting function, including supervision of the general books, accounts receivable, credits and collections, accounts payable, and so forth. In addition, in such cases, the office manager also is responsible for correspondence, mailing and messenger service, filing, stenographic work, and other general office activities. In this capacity the office manager is an accounting officer whose title might perhaps better be, and frequently is, treasurer, controller, chief accountant, or secretary.

In other concerns, particularly in larger corporations, the office manager is solely a service executive having responsibility for all types of work that are general and common to all the individual working units of the general office, such as correspondence, mailing, filing, messenger service, telephone and telegraph, maintenance, and so forth.

**Growing importance of office management.** In the past, the office manager's job has had to do with clerical routine. If, however, the office manager of today allows his ideas of the position to be limited by this fact, he is likely to become merely a chief clerk, or a glorified office boy. This attitude, however, will be an admission that he has neglected his opportunities for service, and both he and his

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company will be losers because of his failure to appreciate the opportunities of his position.

A study of the historical background of the profession of office management clearly shows that at first the position usually carried with it simply a meaningless title. Traditionally, each department head had been considered somewhat of a law unto himself, with the result that the majority of office managers of ten or more years ago found it most difficult and sometimes quite impossible to take over from the key men in the different departments the office duties which had accumulated and which they had been accustomed to look after.

This very desire for independence of action on the part of department heads, however, proved to be one of the chief reasons which made it obvious to an increasing degree that the centralization of office tasks would be a desirable step. Costly duplications and lack of coördination between the work of various departments were the two chief causes. In a word, the increasing size of the business unit and the constantly growing complexity of administrative problems have combined to make the office manager's job a necessary one in modern corporate organizations. The result has been that today the field of office management has logically and constructively reached out until it embraces a wide field, one which is potentially a powerful factor in the development and conduct of any business.

During the past ten years, particularly, office management has come to be a recognized and accepted activity in the great majority of our business organizations, both large and small. This is shown clearly by an analysis of the replies received to the three questions: "What position did you hold before taking your present position?"; "In your organization, for what higher position might the office manager be in line, or to what position was the previous office manager promoted?"; and, "Is the prestige of the office manager rising or waning?" The replies formed an important part of a survey of the status of the office manager

made by Messrs. Keany and Lamb of the Massachusetts Institute of Technology in 1929, in coöperation with the National Office Management Association.<sup>1</sup>

In answer to the first question the survey disclosed that seventeen per cent of the responding office managers had previously held the same position with other companies. Fifty-two per cent worked their way up through the office, either with the concern with which they were then employed or in some other concern, while the remaining thirty-one per cent came in from executive positions outside of strictly office work. The fact that many were office managers with other concerns would seem to indicate that office management was even then (1929) coming to be looked upon as a profession. A few years prior to that time this would not have been true since office management, as a specialized activity in business organizations, is a comparatively new field in the business world.

Perhaps the most significant thing in this analysis is the fact that office management requires special training in a high degree. Since some of the fifty-two per cent of those who reported in the survey that they were holding the position of office manager were taken from other executive positions, such as treasurer, assistant treasurer, assistant secretary and production manager, there would seem to be a tendency to put the office manager at least on a level with these positions. Certainly, there is a tendency toward increasing recognition of the function as being one of primary importance.

Considering the results without making any particular classification by types of business, Messrs. Keany and Lamb found that the positions of vice-president and secretary ranked first as probable promotions; followed by the position of treasurer and then assistant treasurer. These four answers represented more than one-half of the total. As all four of the positions are at the top of the organization, and are given as the next promotion, it seems fair to assume that the office manager is often only one grade below that held by major executives.

However, when the answers from the manufacturing, insurance and banking concerns were analyzed separately, the results showed a considerable difference. In the manufacturing concerns the positions of treasurer and assistant treasurer were re-

<sup>1</sup> Adapted from Keany, Mathew, and Lamb, Philip A., "The Status of the Office Manager," *Annual Proceedings*, p. 67. National Office Management Association, 1929.



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garded as the most probable promotions in an equal number of cases. In the insurance and banking groups one half answered "secretary" and the other half "vice-president," which would seem to indicate that in both groups there is a decided tendency toward standardization of promotion.

The survey definitely confirmed the fact that the prestige of the office manager is rising. Only five per cent gave the opposite opinion. One office manager expressed the opinion that "the prestige of the position is rising in function, but waning in title." This statement succinctly summarizes the questions of lines of promotion just discussed. Other office managers expressed the opinion that there was considerable opposition to the use of the title "office manager." The fact that the survey showed that the title was used in only twenty-nine per cent of the cases would seem to substantiate this view. The authors express the opinion that in companies where the office manager has more than one position, as he does in most cases, he prefers to use his other title, since it is probably more generally known and recognized.

**Increasing use of records.** The increasing use of records as an essential aid in managerial control has had a marked influence in making clear the necessity for an office manager. Action based on personal observation and first-hand knowledge is more and more giving way to decisions based on reports and records. Executives necessarily are finding themselves increasingly dependent upon records as a means of securing information and exercising control. This dependence upon records is strikingly illustrated by the fact that it is estimated there are some 3,500,000 clerical workers in the United States today, compared to 1,631,626 in 1910 and 2,951,008 in 1920.

A moment's consideration of the nature of many present-day business organizations will perhaps make this point more clear. Consider, for example, the striking contrast, from the standpoint of records and record keeping, between the needs of the independent retail druggist operating a single store with the aid of one or two clerks, and the requirements of such an organization as the Liggett Drug

Company. In the first case the proprietor himself needs only the simplest sort of records and reports. He can, for example, tell in a moment the amount of business done during the day simply by looking at the cash register tape. An inspection of the stock of goods of a particular commodity that is on the shelves, together with his personal knowledge of the number of cases stored in the basement, enables him to tell at once whether an additional supply of that item should be ordered. No stock records are necessary. Money paid out for salaries and general running expenses as frequently as not is taken from the cash drawer by the proprietor himself. Thus the owner has constant personal knowledge of both income and expenses.

The president of the chain drug company needs exactly the same sort of information as the corner-store druggist. In practically every case, however, he or his principal assistants must secure the information by means of records prepared and reports made by a small army of subordinates. The district supervisor, the division supervisor, and the general superintendent of stores of necessity all come between the individual store manager and the chief executive. By force of circumstances the president is unable to keep in close personal touch with what is going on in a given store. He must depend upon what others tell him and, more particularly, upon records and reports which are periodically prepared for his information.

**Ratios of office expense to general overhead.** The increasing dependence on records is clearly reflected in the ratio of office expense to general overhead. The following tabulation shows how large a percentage of total general overhead consists of office costs, a ratio which is not generally recognized. Note that these percentages range from 24 per cent to 61 per cent, depending upon the nature of the business. The figures shown are, for the most part, averages of a large number of concerns in the same line of business.

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### RATIOS OF OFFICE EXPENSE TO GENERAL OVERHEAD IN MAJOR LINES OF BUSINESS<sup>2</sup>

Street Railways .....	24.0
Retailers .....	28.7
Motion Picture Companies .....	30.0
Department Stores .....	41.0
Wholesalers .....	43.5
Printers .....	44.0
Manufacturers .....	52.0
Railroads .....	59.0
Banks .....	60.0
Insurance Companies .....	61.0

Parallelism between the “working” organization and the “silent” organization. The importance of office work and records may also be clearly illustrated by comparing the “working organization and the “silent” organization.”<sup>3</sup>

In every well-managed business there is a distinct parallelism between the working organization of men and of equipment and the silent organization which consists of the system of reports, instructions, and messages. Practically everything which happens, in whatever department it takes place, is provided for in some record or report. Even when a stenographer is tardy, the fact appears in writing somewhere—let us say, on a tardiness slip. When a salesman makes a call, his daily report shows the result. When a workman spoils a half-finished piece, that fact is noted somewhere. These innumerable items are absorbed in some way into summarized departmental reports; and eventually in a still briefer summary reach the top executives of the business. In case action is called for, particularly action affecting other departments, a written form of message conveys the facts to the proper person to make a decision. Other forms and manuals provide instructions governing the action. All this is everyday, and practically universal, practice in large organizations.

#### The place of the office.<sup>4</sup>

Some writers on office management, perceiving the important position attained by the office within recent years, have at-

<sup>2</sup> Butler and Johnson, *Management Control Through Business Forms*. Harper & Brothers, New York, 1930.

<sup>3</sup> *Ibid.*

<sup>4</sup> Bengé, Eugene, *Cutting Clerical Costs*. McGraw-Hill Book Company, Inc., New York, 1931.

tempted to set it up as a major function. While the importance of the office cannot and should not be denied, it is well to remember that the office is primarily a facilitating or servicing function for the five functions of production, sales, finance, accounting, and administration. The office cuts across the lines of all these functions, frequently serving as a direct servant of the fifth function of administration.

### **The office in production.**

The primary contributions of the office in production are to record labor and materials entering into the manufacturing processes, in order that production costs may be obtained. Among its other contributions in this direction should be mentioned purchasing, storekeeping, equipment maintenance records, routing, planning, scheduling, standards, allocation of overhead, records of quality and waste, and coördination with other aspects of the business. The administrative aims of the production manager—planning, organization, direction, and control—are largely served through his clerical staff. As subdivision of production operations increases in complexity, the production executive must rely more and more upon regular records, reports, and similar office products to give him the information upon which to base decisions and policies. In a sense, the production office force represents an extension of the eyes and of the comprehension of its chief executive.

### **The office in selling.**

Somewhat different are the clerical eyes which scrutinize sales, market possibilities, advertising, merchandising costs, media, public relations, and similar phases of the process of distribution. In this branch of the business, the clerk must have a viewpoint of commercialism if he is to interpret properly the day-to-day results of selling effort. Not infrequently he develops this viewpoint to such an extent that he is able to assume direct sales activities, such as customer or dealer contact, advertising, territorial supervision, or public contact. Telephone conversations with irate customers, letters replying to complaints, over-the-counter adjustments, collection work, solicitation, and similar relationships between clerks and the public provide splendid training for sales work. The sales manager who surrounds himself with capable clerical assistants is building for future expansion, as well as protecting the administrative phase of his job.

### **The office in finance.**

The office is inextricably interwoven with the function of finance. A good example is to be found in the transfer clerk, who records changes of ownership of the securities of the corporation.

Generally the treasurer, as the chief financial executive, leans heavily upon the clerical group surrounding him, even though he may, single-handed, negotiate loans, transfer funds, purchase securities, and perform other financial duties. The line of promotion from financial clerk to financial officer is a straight one; indeed, seldom are financial officers trained in any other manner.

### **The office in accounting.**

To many individuals the accounting department is synonymous with the office force. This confusion persists mainly because the accounting function requires so many clerical employees for its performance, just as the production function requires non-clerical employees. Basically, it is possible to differentiate clerical from accounting work, but when accounting activities are minutely subdivided as in large clerical organizations, particularly when office machinery is utilized, differentiation is useless or even impossible. Practically all accounting work consists of clerical acts, although not all clerical acts belong to the field of accounting. For the vast majority of clerks who are untrained in specialized phases of production, sales, or finance, accounting offers the logical promotional outlet. There are few clerks and, indeed, few administrative officers, who cannot be benefited by a thorough knowledge of accounting, especially as it is practiced by the employing company.

### **The office in administration.**

In addition to the foregoing, each major executive, be he in production, sales, finance, or accounting, has an administrative problem in carrying out the responsibility with which he is charged.

The sales manager, for instance, requires clerical assistance in gathering data for planning; in bringing together the necessary men and materials for an adequate sales organization; in directing the field activities and coördinating them with the home office; and, finally, in continuously checking up sales results in order that he may remain in control of the situation at

all times. In similar manner, the production, finance, and accounting executives have administrative problems of planning, organization, direction, and control which necessitate competent clerical assistance. If administration is the lifeblood of these four important organs of the corporate body, then clerks are the corpuscles, conveying each his share of energizing, tissue-building elements to be placed at the disposal of the main organs.

It is false organization, however, so to centralize responsibility for clerical operations that the executives in charge of the four major functions are hampered in the administrative phases of their respective assignments. As long as administrative powers remain decentralized, the facilitating clerical activities upon which they must lean so heavily for their successful fruition should likewise remain decentralized and subject to the authority of the production, sales, finance, and accounting executives. Other clerical activities, pertaining to these four major functions, but not required for their administration, can and should gradually be brought under the guidance of a controller, who is emerging as the administrative officer of the future, on a parity with the existing four. This development obviously is of major importance to the progressive office manager.

**Professional status of the office manager.** The question of whether the office manager has as yet attained, or indeed can ever hope to secure, professional status comparable, for example, with that of the accountant, of the corporation lawyer, or of the advertising man, is one which has been discussed for years.

Over twelve years ago Mr. William H. Leffingwell laid down the following requirements, which he regarded as fundamental to the establishment of office management as a profession <sup>5</sup>:

First, the office manager must organize the work, exactly as a production manager would organize his forces to produce a commodity. His special commodity is service—clerical service. This is neglected in many offices, with the result that all too often they appear to be nothing more than a heterogeneous collection of individuals, performing many miscellaneous and apparently unrelated tasks. I do not refer to departmentalization

<sup>5</sup> Leffingwell, William H., "Office Management as a Profession," *Annual Proceedings*, pp. 4-16. National Office Management Association, 1925.

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—that easy solution adopted by so many. The real problem is to so organize the entire force as to ensure the rendering, first of all, of an efficient, high class clerical service.

Next, it is his job to eliminate waste wherever he finds it. Of course, any office manager would consider himself remiss if he did not eliminate detected waste in the messenger force, or in the stenographic department, but it requires a courageous person to go after and, by very force of character, eliminate wastes found in high places.

Third, the office manager must have his office under a system of modern production control. He must know what work is to be done, a knowledge that all too few possess. True, the main tasks are known, but hundreds of others are performed, of which the office manager has little or no knowledge. He must know how long it will take to do the work which is to be done. He must know what forces he has available to do the work. Finally, he must know that it has been done. Without such control, no production manager worthy of the name would think he had half solved his problem. All too few office managers have considered the matter with equal care.

Fourth, the office manager must devise methods requiring a minimum of effort. Great progress has been made along this line but when the methods of today and those of thirty years ago are compared, it is quickly apparent that the field is still tremendous.

Fifth, he must properly train his force of clerks. In all too many offices, scientific training methods are simply non-existent. Yet clerical work, to be properly done, requires training of a character equal to if not greater than most factory operations.

Sixth, the office manager must know what constitutes a day's work for a clerk, on any one of a hundred different jobs. Do not hastily assume that this is a simple thing to know. Frederick Winslow Taylor started on this quest to discover what was a day's work for a machinist, and it took him twenty years to get the answer; a long time, no doubt, but when he got it, it resulted in doubling the output of every machine shop in the world. Now I know of no operation in the office that should require twenty years' quest to discover what constitutes a day's work upon it, yet I know of very few office managers who will agree as to what a stenographer can do, to say nothing of what can be done in the hundreds of other office operations.

Seventh, he must secure a day's work from each clerk in his office. Any idea which he may have that the clerks are not

productive workers, like all others who are paid for their services, and should not be so considered, should be abandoned by both the clerks and those who manage their activities.

There is no question that in the twelve years since Mr. Leffingwell spoke substantial progress has been made towards bringing office management closer to the status of a profession. In many offices where clerical work is a major activity, as it is in life insurance companies, for example, methods comparable to those used in factory production are widely used. Economies which office managers were forced to make during the depression years eliminated much wasteful effort. Today the training of office employees is an extremely well organized and productive activity in many companies. The work of such organizations as the National Office Management Association, the Office Executive Division of the American Management Association, the Life Office Management Association, and the Controllers Institute of America has had an important influence. Many of the practices which are cited in subsequent chapters of this book indicate clearly that office management can be more logically classed as a profession than was possible in 1925.

Yet much remains to be done. There are still all too many companies in which office work is regarded primarily as a necessary evil which merits the least possible amount of thought—and money. Progress has been made, but the battle is far from won. A much wider application of the principles of scientific management to the organization and operation of offices must be made before office management can truly be called a profession. This situation, which calls for hard work and perseverance, is a challenge to teachers, to students, and to businessmen.

**Needs of office management.** Mr. Harry Arthur Hopf, a recognized authority in the field of office management, summarized the situation in an address, made in 1930, en-



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titled "What Are the Outstanding Needs of Office Management?"<sup>6</sup>

The first need, and one which is of transcendent importance, is to define the task and scope of office management, to determine its proper place in the organization, and to correlate it with all other activities.

The second need is to train the right men and women specifically for the duties involved, teaching them to think not in terms of office management but in terms of management as applied to the office, a distinction which, from the point of view of securing effective results, it is of prime importance to observe.

The third need is to free the executive charged with office management from the responsibility for operating results, so as to enable him to spend his time in creative thinking and planning.

The fourth need, of equal importance, is for the working out of a long-term, as well as a short-term, program of improvement which will insure the accomplishment of results in the order of their importance and within desired time limits.

The fifth need, and an urgent one, is for the company management to strengthen the hand of the executive responsible for office management, so that he may deal freely and on equal terms with other important executives and secure from them full cooperation in the pursuit of his task.

Finally there is a need for research in office management. There is great need for the pervasion of office management by the scientific point of view and for utilization of the painstaking, laborious experimental procedures which alone have brought about progress in the sciences and extended the boundaries of human knowledge.

**Qualifications of an office manager.** In addition to having a knowledge of the fundamentals, which are an essential part of true professional equipment in any field, the office manager must possess certain personal characteristics and qualifications over and above those which one may naturally expect every successful business executive to have. The more important of these are discussed briefly below.

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<sup>6</sup> Adapted from Hopf, Harry Arthur, "Office Management and the Scientific Point of View," *Annual Proceedings*, pp. 67-68. National Office Management Association, 1930.

**Thorough knowledge of, and experience in, business.** Without a good background of general business experience the office manager will find it most difficult, if not impossible, to win the confidence of his organization and to secure that coöperation from his subordinates and other department heads which is essential to success. In addition, it is desirable, although not essential, that he have had previous experience in the same line of business. The nature of his work brings him into constant contact with many people specializing in a variety of tasks, and, unless the office manager has the proper background of experience and practice, he will find his path a most difficult one.

**Tact and good judgment.** Tact and good judgment form a part of the necessary equipment of every executive. However, in the case of the office manager, these traits are particularly necessary. The very fact that his department is an important coördinating factor in the organization frequently makes it necessary that he suggest changes in methods, a reorganization of activities, or the elimination of certain tasks. Such suggestions, upon first presentation to those concerned, may not be received any too cordially. To handle situations such as these, which are constantly arising, tact and good judgment are obviously very essential.

**Sales ability.** Mention of the need for tact and good judgment naturally suggests a third important characteristic which the office manager should possess, namely, the ability to sell himself, his ideas, and his position to his superiors and to his subordinates. He must, for example, be able to show the chief executives that his position does not merely mean just another item of overhead expense, but that the nature of the responsibilities involved fully justifies it. Getting subordinates to work and work willingly with one is in itself no small task. Here again the ability of the office manager to sell himself is apparent. The fact that responsibility for personnel relations is usually a part of the office manager's work is an added reason

why he must be something of a salesman as well as an office executive.

**Resourcefulness.** The nature of the work for which the office manager is responsible frequently gives rise to unexpected situations which tax his resourcefulness and ingenuity to the utmost. If, for example, the sealing and stamping machine gets out of order—and this is sure to happen at about four-thirty in the afternoon rather than at some less inconvenient time—it is up to the office manager to see that the mail goes out that evening, even though he has to help fix the machine himself, or assist the regular force in doing the job by hand. Again, the office manager may find himself confronted with the problem of absenteeism and constant lateness on the part of certain subordinates. A practical and satisfactory solution must be worked out which will produce the desired results and at the same time not cause resentment and ill feeling. Any one who has been faced with such a problem knows that tact is not the only necessary qualification. A considerable amount of resourcefulness and ingenuity is essential as well.

While it is obvious that resourcefulness of two entirely different kinds is needed in the cases cited above, it still remains true that the office manager who can quickly adapt himself to a situation and work out a satisfactory temporary solution or a permanent arrangement, as the case may be, is the one who will be held in high regard both by his superiors and by his subordinates.

**Methodicalness.** The establishment of office methods that will function smoothly and properly is an essential part of the office manager's task. Success in this work means, in turn, ability to analyze a situation carefully, to obtain all the facts, and to work out a plan which will systematize methods of handling routine work. In listing "methodicalness" as a basic qualification, therefore, the word is not used in a sense of fussiness and pettiness, but rather to indicate the fact that the office manager, because

of his responsibility for office methods, must be able to bring system and order to their supervision.

**Thorough understanding of the term "service."** In the majority of cases, the office manager is a service man. He is responsible for seeing that all types and kinds of general office service, such as filing, mailing, telephone and telegraph, messenger, and stenographic, are promptly and efficiently rendered to the various departments. Since service is fundamental to the office manager's position, he must understand and be able and willing to apply that word in its broadest sense, if he is to enjoy the greatest success in his work.

**Leadership.** Perhaps the outstanding personal attribute of the office executive is that intangible ability which we may call leadership. Craig and Charters list the following qualities that a leader should have<sup>7</sup>:

1. Forcefulness.
2. Ability to inspire confidence.
3. Ability to take a personal interest in the men.
4. Ability to get the work done correctly.
5. Ability to get and use the ideas of the men.
6. Ability to be one of the men.
7. Ability to lead rather than boss the men.
8. Ability to develop teamwork.
9. Ability to show kindness without being considered easy.
10. Ability to reprimand properly.
11. Ability to keep from worrying.
12. Ability to delegate work properly.
13. Ability to call forth best efforts of the men.
14. Ability to train men on the job.
15. Ability to make a new man feel at home.
16. Self-confidence.

Although this list was not intended primarily for office managers, it nevertheless serves the useful purpose of calling attention to certain desirable traits in the leader.

<sup>7</sup> Craig and Charters, *Personal Leadership in Industry*. McGraw-Hill Book Company, Inc., New York, 1925.

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The following list of qualifications, which office managers themselves believe are essential if a person is to be successful in this work, is taken from the survey by Messrs. Keany and Lamb, previously referred to.<sup>8</sup>

- |                                         |                                      |
|-----------------------------------------|--------------------------------------|
| 1. Excellent knowledge of human nature. | 12. Executive ability.               |
| 2. Organizing ability.                  | 13. Leadership ability.              |
| 3. Tact.                                | 14. Self-control.                    |
| 4. Strong personality.                  | 15. Ability to inspire confidence.   |
| 5. Sense of justice.                    | 16. Ability to think constructively. |
| 6. Experience in office work.           | 17. Honesty.                         |
| 7. Tolerance.                           | 18. Command of details.              |
| 8. Scientific mind.                     | 19. Open-mindedness.                 |
| 9. Capacity for work.                   | 20. Concentration.                   |
| 10. Initiative and aggressiveness.      | 21. Intelligence.                    |
| 11. Accounting training.                | 22. Vision.                          |

To this author, at least, it is a rather sad commentary on the thinking of representative office managers that scientific mind, initiative and aggressiveness, leadership ability, intelligence, and vision should be ranked eighth, tenth, thirteenth, twenty-first and twenty-second, respectively, out of twenty-two qualifications mentioned.

**Future trends in office management.** Although this book is concerned with present-day office-management principles and practices, it is worthwhile to give possible future developments some consideration as well, particularly if the reader is considering office management as a life work. A few years ago Mr. Frank L. Rowland, Secretary of the Life Office Management Association, and formerly Secretary of the Lincoln National Life Insurance Company, offered some interesting observations on this subject, which may be summarized as follows<sup>9</sup>:

The future, in all probability, will see a more clear-cut recog-

<sup>8</sup> Keany, Mathew, and Lamb, Philip A., *op. cit.*

<sup>9</sup> Adapted from Rowland, Frank L., "Probable Future Trends in Office Management," *Annual Proceedings*, pp. 53-56. National Office Management Association, 1929.

nition of the functions of staff executives, such as the office manager, as contrasted with the line executives, that is, department heads, section heads, and so forth. In the past there has been a rather hazy distinction between the relative functions of these groups, the organization set-up in particular institutions being determined quite largely by the force of personality of the executives in charge. In large offices it is likely that the department head will assume the position of a line officer similar to that held by the foreman in a factory organization. His duties probably will be confined to three major tasks: (1) to direct and expedite the flow of work through his department, (2) to take care of unusual situations and emergencies which occur in the routine operation of the department, and (3) to develop the technique of the work under his direction.

This plan of organization permits more intensive development and attention to departmental productive activities by the department head, leaving the other miscellaneous functions to be handled by experts. Such other functions would include employment and all other personnel activities, work methods, planning, application of machinery, service functions, and so forth.

The future will see a gradual though steady increase in the wages of office workers. This prophecy is based upon the economic tendency of increasing the return to labor. The increased wages will represent labor's share of increased economies in office operations, and will ultimately result in greater production per dollar of labor expended, notwithstanding increased remuneration to the worker. This tendency will serve as a stimulant to greater economy in office operations, which in turn will enhance the importance of office-management work.

Coincident with increased earnings by office workers, the future will see in the office, as well as in the factory, a five-day week, and perhaps fewer hours per day of labor. A considerable number of institutions have already inaugurated a five-day-per-week plan for the summer months, and reports indicate that there has been no decrease in production on account of the shorter hours.

The future will see an increasing tendency toward the utilization of married women in office work. Society, if it is to continue its prosperity, cannot indefinitely face the economic waste of vast numbers of idle, young married women, whose home duties have been reduced to a minimum through the invention of many kinds of automatic household equipment. It is quite possible that some program will be developed whereby regular half-day or part-time employment will be available for married women.

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No doubt the business institution will in the future become less and less a social unit. The office as a medium for sponsoring social and recreational activities is slowly passing. The numerous varied interests which now bid for the time of young office workers present a situation of actual competition. An office force does not fundamentally represent a homogeneous group. The social life of the individual is more closely tied up with neighborhood companionship, church or social organizations, local fraternities, sororities, and the like. Modern conveniences in transportation have made it possible for these groups to get together more quickly and more frequently than ever before. The moving picture, the automobile, the radio, and the accessibility of recreational resorts all represent serious competitors for the time and attention of office workers.

Office managers can profitably recognize this situation and lay emphasis on a field of activities which can more successfully cater to the interests and welfare of office workers. The office can and will, in the future, make an increasingly important contribution to the health of its workers. Office clinics are likely to be an integral part of large office organizations, and smaller office groups will have access, through the company's support, to public or semi-public health clinics. The economic as well as the social advantages of such a program are obvious.

The time is not far off when the university will understand the peculiar requirements demanded by the position of office manager and will arrange a curriculum accordingly. The complete training, either in the form of undergraduate or post-graduate work, will include part-time studies carried on in well-managed offices. No other type of work carries with it the wide variety of demands existent in the position of office manager. At least a dozen letters received from business managers during the last year soliciting assistance in filling positions of importance along office-management lines indicate that already there is a shortage of qualified men for this field.

Because of the intimate contact which an office-administrative executive has with practically all phases of the operation of the business, the future will see an increasing number of instances where directing heads are recruited from this class of junior officers. There have already been notable instances of this practice in the past.

The future will see a more highly developed and rational program of educational and instructional activities in office institutions. Instructional activities will be confined to the highly specialized routine office worker, and a select group will receive

the advantages of broad educational programs applied to the particular business in question, just as special training for the above-average student is being recognized by academic institutions.

There is sufficient indication already to make it safe to prophesy that the future will see greater attention directed to the subject of job analysis as applied to office operations. However, as time goes on this procedure will be broadened to include, in addition to detailed descriptions of jobs, the physical, mental, and emotional characteristics required.

The time will come when an employment manager will be furnished with material which will make it possible to evaluate a job, as compared with the possibilities of the applicant, with a high degree of accuracy.

Tests will also undoubtedly be developed to make possible a "personality analysis" of the worker, which will enable the worker to know more definitely the qualities he possesses in comparison with those required by various job specifications, to the end that the worker will have a greater chance than previously for successful accomplishment.

In the future office work may be performed in three or possibly four shifts extending throughout the twenty-four hours of the day. A great economic waste exists in permitting costly office buildings, equipped with expensive machinery, to remain unproductive 70 per cent of the time. The shift system will first be adopted, no doubt, in offices located in the congested areas of large cities where office space is hard to obtain and highly expensive. The program of working three or four shifts a day will result in other economies than the utilization of building equipment. The overhead, particularly that which represents salaries of officers and directing heads, can be pro-rated over twice or three times the units of production than is possible under the present program of working seven or eight hours a day.

This waste of space was brought very vividly to my attention a few months ago when I visited a large office in New York City. When I inquired from the office executive what provision had been made for expansion, he stated that they had considered this problem at the time they erected their building, which is an expensive one, and had decided that the probable solution would be to work in two shifts, then three, and possibly four, if the hours of the day were shortened. In some of their departments they have already started on the two-shift plan, and are confident that it is perfectly workable.

In the future the laboratory will attain the same degree of im-



portance in the office that it has had for many years in the factory. Intensive research work will be done on such problems as time and motion studies, testing office and supply materials, and checking physiological factors—light, heat, noise, and so on. The results of university research work will be made available to supplement these studies.

The future will see an even greater utilization of mechanical and physical inventions as aids to office efficiency than has occurred in the past. In the past, inventions in office machinery and equipment have been made almost entirely by mechanical rather than office engineers. The future will also see the development of inventive talent among office staff men.

Perhaps the most revolutionary piece of office equipment, which in my opinion will be developed some day, will be a contrivance which will translate the spoken word into the written word. It seems rather fanciful to imagine elimination of the typist or stenographer between the operation of dictating and obtaining the typewritten letter; however, it is no more fanciful than the translation of light waves into sound waves, which has been accomplished, as evidenced by the talking movie picture. However, before this gap between the voice and the letter is mechanically bridged, we will find ourselves dictating to microphones, electrically recording our spoken words upon waxed records located in a central transcribing bureau.

One of the most important developments is likely to be the creation of machinery to disseminate and utilize the studies and experience of others. How much time and energy are wasted by the office manager, and how many fatal mistakes are made through failure to search the field of literature and experience of others in problems with which he is confronted? The future will see evidence of more publicity concerning business and management problems, and closer coöperation among business and professional men will be the characteristic of the future day. There will be a marked increase in the tendency of business managers to join coöperative programs of research, to participate in activities involving an interchange of ideas, and to promote standardization in product and management.

It is interesting to note that a number of the prophecies which Mr. Rowland made some years ago have already been fulfilled, in whole or in part. Certainly it is true that today there is a more clear-cut distinction between the functions of line and staff executives. An increasing num-

ber of companies have adopted the five-day week. More and better-organized courses of instruction in office management are being offered by universities and other educational institutions. Much has been accomplished in the fields of job analysis and testing. Every year business equipment manufacturers improve their present appliances and offer new ones. All these developments make it clear that the field of office management is far from a static one and that the future offers the progressive office manager increasingly better opportunities for service and personal reward.

## CHAPTER II

### *Organization and the Work of the Office Manager*

**The four basic divisions of business.** Fundamentally the functions of any business organization may be grouped under four headings—production, finance, distribution, and administration. The specific relationships which each of these main divisions—and in turn, their subdivisions—bear to each other may be referred to as organization. Although the general office is usually a part of the division of administration, all of the office work in certain kinds of business, and some of the office work in practically all companies, is more closely related to production. This relationship is worth thinking about for a moment in considering the organization and work of the office.

**The office as a productive activity.** A moment's consideration will show that every business, whether it is engaged in manufacturing automobiles or in underwriting insurance risks, produces a product or service of some kind. The units of the organization which have to do with this production constitute the production departments of that company. This is true, regardless of whether the company sells a material object or an intangible service. In the home office of an insurance company, for example, hundreds of clerks are employed to perform a wide variety of operations on the insurance applications and policies. In a mail-order house, similarly, many persons are engaged in preparing the customer's order for shipment, the operations being divided into a series of specialized tasks, each of which

is necessary to the successful completion of the finished job. It will be made more clear in subsequent chapters that the principles that are followed in organizing such work are, in many cases, the same ones which have been applied successfully for years in manufacturing plants. The mere fact that the operations are performed in an office and are considered clerical work does not in any way make them non-productive. Thus in a very real and practical sense the office is an important productive activity in every company.

**Organization.** In the previous section organization was defined as the relationship which the four basic divisions of business bear to one another. This definition, however, is somewhat too general. More specifically, organization may be defined as the division of a complex objective into minor activities, each of which is within the scope of individual effort. This view will serve perhaps to crystallize our conception of organization. Thought of in this way, it is clear that the work of organization consists of subdividing the whole task into relatively small parts, so that each may be done successfully by a single individual. For example, the primary responsibility of the president of an automobile company is to produce and sell automobiles at a profit. This is the complex objective. Obviously, however, the president cannot do everything himself. He, therefore, breaks down this objective into major component parts or divisions and places in charge of each a person who, by past training and experience, he feels is competent successfully to handle that part of the work. Thus he may appoint a vice-president in charge of sales, a vice-president and treasurer, and other major executives.

Organization, of course, does not stop here. These men, in turn, cannot do all the work personally. They, therefore, subdivide their responsibilities, placing in charge of each main subdivision a person who, in their opinion, is competent to do the work. Thus the vice-president in charge of finance, for example, may appoint a controller,

an office manager, a credit and collection manager, a cost accountant, and so on.

These department heads, in turn, analyze their responsibilities and again subdivide them. The office manager may decide that centralization of the filing function is desirable. Therefore he organizes such a department and appoints someone to take charge of it. Similarly, a centralized stenographic department and a centralized mailing and messenger department may be established. The heads of these units, in turn, have their organization problems.

It may truthfully be said that as soon as one person is employed by another, there is organization. While it is obvious, of course, that the problem is more complex in a large company than in a small one, the fact still remains that the problem is present and must be solved. Success in solving it distinguishes the organizer from the mere employee.

**Management.** Management, as distinguished from organization, has to do with the work of bringing about the proper coördination between the various factors with which it has to deal, among which are men, materials, money, methods, and machines. These five factors are often referred to as "the five M's" of management, and even a brief analysis of any managerial problem will show that one or more of them is always involved. Horace Greeley is said to have defined a businessman as how to set other people's heads and hands at work, both to his profit and their own." In making this statement he very obviously had the business manager in mind. Organization then may be spoken of as the building or developing element, the structural element, if you will, while management is the directing, controlling, and coördinating element.

**Scientific management.** The management which applies science to its work, which demands facts instead of guesswork, which establishes standards and methods which are scientifically determined, and, through the aid of

records, sees that they are carried out, is spoken of as Scientific Management.

W. H. Leffingwell ably summed up and explained scientific management in his statement of "How to Manage" as follows:

1. Define your purpose.  
You must know what is to be done before you can know how to do it.  
This is your master work.
2. Analyze your problem.  
Your master task will then break up into many detail tasks. Consider them all—neglect none.
3. Seek the facts.  
Study every condition governing each task. Find the undesirable elements, and the desirable elements to be retained. Then standardize right conditions.
4. Devise the one best method.  
Aim to conserve energy, time, space, and material.  
Determine the relation of details to the master task.
5. Find the person best fitted.  
For each task certain personal qualities are essential. In each person certain qualities predominate. Find the person best fitted for the task at hand.
6. Teach the person best fitted the one best method.  
Not by driving, but by thorough, patient teaching are understanding and skill developed.
7. Plan carefully.  
Right planning of the arrangement and sequence of work will enable you to accomplish tasks in logical order—accurately, quickly, and economically.
8. Win coöperation.  
Coöperation means working together. It cannot be demanded. It must be won. Accept your share of the responsibilities. Respect the rights and aspirations of others.

Scientific management, although originally developed in the machine shop, is equally applicable to the office, be-

cause it is simply using common sense in applying knowledge. When scientific management is considered not as a set of arbitrary rules, but as a means of getting the best out of the business, it is appraised more nearly at its true worth.

Scientific management lessens the cost of attaining results without injury to health or other detriment to the workers. It improves working conditions, increases the earnings of employees, and gives more and better articles and service to the public at much lower prices than would otherwise be possible.

**System.** Observation of the way in which many organizations are operated shows clearly that even among experienced businessmen there exists considerable confusion between management and system. It is of the utmost importance that a clear distinction between these two be drawn. System may be defined as the application of planned methods of procedure to business operations. Through system, every-day work becomes routine. Unfortunately, in the past there has been a tendency to assume that a good system involves much red tape, many forms to be filled out, and considerable delay. As a matter of fact, the real object of system, and, therefore, the characteristics of a proper system, are exactly the opposite. It is the purpose of system to smooth the way for the performance of routine tasks, to speed up work, and to increase, rather than to diminish, efficiency. System is a valuable and distinct mechanism and an aid, both to organization and to management, but is in no way synonymous with either.

**Types of business organizations.** Since the organization and work of the office and its relative importance in a given business depend to a considerable extent on the organizational structure of the company itself, it is important that the reader be familiar with the types of organization in common use today.<sup>1</sup>

<sup>1</sup> Adapted from Cornell and MacDonald, *Business Organization and Practice*. American Book Company, New York, 1936.

1. *The line type of organization.* This type is patterned after the ancient form of military control, under which the general made all decisions, mapped out all plans and procedures, and issued orders to his subordinates, who were directly responsible for carrying them out. The subordinates in turn would pass the orders on to those directly under them, and so on down the line to the ranks. In business, the line type is the direct outgrowth of the one-man organization in which the owner or manager issued all orders to the workers, who were directly responsible to him. As the business grew and the manager found it impossible to attend to and control everything, he hired an assistant, who was directly responsible to him and through whom he issued his orders to the workers. As business further developed, more and more assistants were required, each one in the organization being responsible only to the one immediately above him.

The line organization is excellent as far as giving orders and defining duties and responsibilities are concerned. It has, however, very marked disadvantages. To be efficient, the line organization necessitates the highest grade of executives and workers. It is humanly impossible for any man to be efficient in every line of endeavor. Therein lies the main weakness of the line type. No other type demands such all-round knowledge and ability. The head of each department has complete charge of that department, and is held directly responsible. He must understand how the work should be done, plan and lay out the work for the whole department, see that the equipment for doing the work is on hand and in good condition, determine proper methods, hire the workers, instruct them, adjust their wages, and take care of an infinite number of other details. Staggering under his load of duties, the head of the department in his turn demands of the workers more than can be expected of them. He becomes a driver instead of a leader. Line organization is an autocratic control requiring absolute obedience and all-round knowledge, with the result that while much may be accomplished, the work is likely to be crude, and the workmen "jacks of all trades and masters of none." It must not be concluded, however, that the line-type organization does not hold an important place in modern business. While the strict line organization is rarely found in any enterprise of considerable size, line organization is invariably found as a part of the organization of every enterprise.

2. *The functional type of organization.* This type of organization is radically different from line organization. It does



away with the demand for "all-round" men and in their place uses experts—men trained for a particular kind of work. There is no direct flow of authority from the head of the organization down to the workers. The work of supervising is divided according to the functions needed to carry on the business, and a specialist is placed in charge of each function or small group of related functions. Each specialist or supervisor has control over the functions in his charge, no matter where they are found throughout the business. For example, in the line type of organization, the head of a department has complete charge over his department; he plans the work, instructs the workers, inspects the work, and so on. Under the functional type, however, one supervisor may have charge of the order and routing of all work throughout the business, another may have charge of the instruction of all workers, another of all inspection work, and so on.

In the line type the worker comes into contact with one supervisor, who has absolute control in all matters relating to the workman and his work. Under functional organization, the worker comes into contact with and takes his orders from several functional supervisors. He takes orders from and is responsible to each supervisor only in regard to the performance of the particular function or functions over which that supervisor has control.

Competent supervisors are more readily found in the functional type of organization than in the line type. Since the field of the supervisor is restricted to the performance of his particular function, he can be trained more readily for his work. The field of activity of the supervisor in the line type is so broad and covers such a variety of work that a man must have exceptionally wide training if he is to be capable of carrying out all of the required duties properly.

The principal disadvantages of the pure functional type of organization are that there is a tendency to over-organize and over-specialize, that control is not definite, and that discipline is weak.

3. *The line-and-staff type of organization.* While the pure functional type of organization is not used to any extent in business, its introduction has served to emphasize the inadequacy of the line type. The result has been the adoption, by many concerns, of the line-and-staff type of organization, a combination of the best features of both the line and the functional types. Authority flows from the top to the bottom, as in the line type, thereby definitely fixing duties and responsibilities, and

insuring proper discipline. In addition to the regular line supervisors, however, there is a staff of experts. Each expert is at the head of a staff department. The personnel manager, for example, is a staff man, who works in an advisory capacity with all departments. In most cases the office manager is both a line and a staff executive, some of his duties, such as the direction of the mailing and messenger, central stenographic, filing, and building-maintenance departments, being line responsibilities, while work on such matters as office layout and departmental audits comprise his staff activities. The staff men and their assistants work out the problems relative to the performance of the particular functions of which they have charge, but do not, as under the functional type, give their orders to the workers directly. Their recommendations are carried out through the line supervisors, who are in direct charge of the employees affected. In this way the supervisor directly controls the workers under him and maintains the proper discipline, but he does not have to bear as heavy a load of responsibilities as under the line type. He is responsible for seeing that the recommendations of the staff experts are carried out, for the control of his men, and for all other duties assigned to him, but is relieved of solving the many problems handled by the staff.

4. *The committee idea in organization.* The use of the committee idea in organization involves the appointment of one or more committees or groups of individuals, each of which considers the methods, policies, and problems relating to that phase of the business in which the members are most interested because of their every-day work. A committee may consist of any persons connected with the company—either wholly of officers, of heads of departments and their subordinates, or of a combination of them. Usually the work of the committees is purely advisory. Their recommendations, however, frequently receive favorable action by those in authority and thus become binding.

Committees in organizations serve many purposes. One of the most vital is to foster a spirit of coöperation. In some instances the dominant personality and ability of the chief executive and of the major department heads are felt throughout the entire concern, and by sheer force they create a spirit of loyalty and coöperation throughout the organization. In the majority of companies, however, this is not the case; the concern may be so large that the force of one individual's ability and personality cannot reach the mass of the employees. In such cases committees can be used to develop this vital spirit of coöperation

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Another useful purpose which committees serve is to make the members learn to appreciate one another's problems. Thus they learn how to work together successfully for the good of the company as a whole, rather than to restrict their interests to their own departments. Committees wisely formed and discreetly guided tend to eliminate the feeling, on the part of the members, of having always to guard the rights of their own departments.

As the result of their discussion of policies and methods, committee members come to regard the policies and methods which are adopted as their own, at least in part, and therefore they are more eager to see that the plans are properly interpreted and carried out.

Although the use of committees has decided advantages, this plan of organization has one serious drawback. Committees are seldom authorized to make final decisions; their primary function is to recommend. Other executives must ultimately establish policies, and if they are not in accord with the recommendations of the committees, the latter may feel that their views have not been well received. This in turn may lead to friction between the principal executives and committee members.

Generally speaking, however, the advantages of committees outweigh their disadvantages, and the use of the committee idea in organizations, within reasonable limitations, is to be recommended.

**Trends in organization.** In order to furnish a proper fundamental background against which to evaluate present practices in office organization and management, it will be helpful to consider briefly three developments in organization which have taken place in recent years.

First, there is a distinct tendency, in organization, to recognize the importance of the functions of the controller and of the personnel manager, and to appoint major executives to these positions. This trend is of the utmost importance to the office manager, largely because it recognizes the increasing dependence upon records, referred to in Chapter I, and because it clearly indicates the increasing need for someone able to control business operations through proper methods and system of records. Clearly,

businessmen are realizing more and more the necessity and value of records and are showing a practical appreciation of this need by the appointment of major executives whose principal duty it is to supervise this work.

The formation of the Controllers Institute of America in 1932, whose membership consists entirely of privately employed executive accountants with the title of controller, and of others who are performing that function—and its rapid growth from a small local body of thirty to a national organization with a membership of over eight hundred—is ample evidence of the importance of this trend.

The increased attention being given to the work of the personnel manager is of the greatest possible interest to the office manager, because in many cases the office manager is either entirely or partially responsible for personnel matters. The selection and training of employees and other personnel activities are treated in detail in Chapters XXI, XXII, and XXIII.

A second major trend in organization is the establishment of a means whereby coördination of the activities of the various divisions or departments of the business may be secured. The need for a coördinating influence in business was touched upon in the preceding chapter. It is of obvious importance to the office manager because one of his principal functions is coördination.

The third trend is the tendency to establish incentives to encourage efficiency. Even though the most careful attention has been given to the organization of a business, real efficiency does not exist unless incentives are provided which will induce the members to put forth their best efforts. Piece rates, bonus plans, and other incentives for factory workers have been in common use for many years. During the last decade a rapidly growing number of companies have applied similar plans to various groups of office workers. The specific methods used in working out such plans, and the results secured, are discussed in detail in Chapter XXIV.

**Types of office organizations.** Office organizations are of three main types, depending to a considerable extent upon the status of their development and on the size of the company, and on other considerations.

First, there is the office in which but few persons are employed and where, consequently, most, if not all, of the office work is done in one room under the general supervision of one person who usually has other duties, such as accounting, correspondence, and so on. In cases such as this no specialization of tasks occurs, and versatility on the part of the executive in charge, as well as on the part of the subordinates, is an outstanding characteristic. In such cases twenty persons or fewer are usually doing strictly office work, and a minimum of systematic procedure is likely to be found. The need for proper organization, management, and system exists here just as much as it does in the case of the larger company, but, since informal methods of accomplishing the work are traditional in such concerns, it is seldom that one finds any serious attempt to apply correct principles in anything more than the most general way.

As soon as the volume of a particular kind of work becomes sufficient to justify its separation from the other work of the office and the employment of a group of persons to do this work exclusively, the small-office type of organization begins to disappear and the so-called departmental type is likely to take its place. The outstanding characteristic of this type, therefore, is specialization. In theory, at least, each department is a self-contained and self-sufficient unit, making little or no use of the services of a central office organization.

The third form of office organization is the centralized type, in which all functions common to all departments are centralized. Thus, for example, the function of handling incoming and outgoing mail and providing messenger service is put under the jurisdiction of one person, who is responsible for seeing that this particular type of service is

effectively rendered to all other departments of the company.

In practice, fully departmentalized and centralized types of office organization are found only infrequently. Take the example of mailing and messenger service just cited. One will find many cases in which a so-called mailing and messenger department exists, but almost invariably one or more messenger boys will be found who are definitely and permanently assigned to the offices of one of the chief executives. Similarly, many examples of so-called fully centralized filing and stenographic departments exist which, upon investigation, prove to be entirely centralized in theory only. Rarely, if ever, does one find the chief executives and department heads utilizing exclusively the services of these departments. The president, the treasurer, the sales manager, and others find it desirable to have their own private secretaries and to file certain letters and papers in cabinets in their own offices. Thus, even though the centralized or departmental type of organization may, on the surface, appear to exist, exceptions arise to a degree which make it impossible to say that a pure departmental or centralized form of organization is to be found.

**Advantages and disadvantages of centralization.** Inasmuch as centralization is a problem which is fundamental to the work of every office manager, it will be worthwhile to state briefly the advantages and disadvantages of this form of office organization. These may be summarized as follows <sup>2</sup>:

*Advantages:*

1. The greater ability of a concentrated group to handle peak loads and to function satisfactorily during unusual periods, such as vacations or when the operating force is reduced by sickness. This may be said to be "operating flexibility."

<sup>2</sup> Beers, W. M., "Centralization of Office Operations—Why or Why Not?" *Annual Proceedings*, pp. 60-61. National Office Management Association, 1935.

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2. The possibility of transfer of employees engaged on more or less similar work between groups in order to apply their efforts where they are most needed, for example, shifting stencil cutters to ribbon typing, assigning stenographers or dictating-machine operators to turn out simple or tabulated copy work, and any combination of these types of services dependent only upon the employee's ability.

3. Equitable salary administration based on measured efficiency can be secured. This is not possible to any extent when groups are segregated in a number of small, independent units.

4. Because of its flexibility, a centralized group allows for the addition and training of recruits, whereas it is likely that in small groups the addition of any but highly trained personnel will cripple the operations to too great an extent.

5. Specialized and uniform supervision is a natural concomitant in the operation of centralized service groups, and thereby the introduction of improved methods applied uniformly is greatly facilitated.

6. With the establishment of large service groups, the introduction of production incentives follows naturally. Through the comparison of output and unit costs healthy competitive instincts are aroused.

7. The application and administration of appropriate, adequate, and useful plans for measurement of output are more likely and effective where a large group is involved. Both the employee and the employer benefit from the use of accurate measurement plans, since both will have a dependable yardstick by which to measure value received; the employee—the contents of the pay envelope, and the employer—the quantity and quality of the work produced.

8. Decrease in supervisory costs. The reasons for this are obvious.

9. In an assembled group an employee's time can be occupied more efficiently, and to a much greater extent than in the case of individuals or small groups, because of the more even flow of work.

### *Disadvantages:*

1. Possible reduction in efficiency of departments served by large central groups, due to delays in service.

2. Objection to sending work of a confidential nature into a general service department.

3. Loss of the close proximity which is essential because of

the necessity for explaining detailed requirements, and the making of minor changes and corrections.

4. Possible lack of effective control as to precedence of service to different departments or on particular jobs.

5. Time spent in transporting material to and obtaining finished work from production units.

**Combining centralized and departmental types.** An example of a plan whereby many concerns secure specialization without incurring the disadvantages just mentioned is found in the way in which stenographic service is frequently organized. Assume, as a specific illustration, an office having ten executives, each doing a different type of work. Under the departmental method each would have his private secretary, who worked only for him. When work was slack, she would be idle; if work was heavy, she would be rushed. Under the purely centralized type of organization, on the other hand, none of the ten stenographers would be assigned permanently to a single individual, but would be sent to any one of the ten executives as specific conditions and the amount of work which they already had on hand might indicate.

It is obvious that neither of these arrangements would be entirely satisfactory either to the executives or the stenographers. Under the combination plan, however, each executive has assigned to him one girl who does his stenographic work as the need arises. She is located, however, not in his private office, but in a room with the other nine stenographers and under the general supervision of a head stenographer or supervisor. If a particular executive is away from the office for a few days, or if, temporarily, the amount of work which he has to do is insufficient to keep his stenographer fully occupied, other work is assigned to her by the supervisor. She may be sent, for example, to take dictation from any one of the other nine executives whose work at the moment may be greater than his own stenographer can handle conveniently. Thus a minimum



of the stenographer's time is wasted through lack of work, and inconveniences to the executive on account of absences due to sickness, vacations, and other causes are reduced to the minimum. The net result of the plan is that both the executives and the stenographers secure the benefits of a private secretarial arrangement with all of its obvious advantages, but with most, if not all, of the usual disadvantages eliminated.

The Metropolitan Life Insurance Company plan. In discussing the advantages and disadvantages of the centralized type of office organization as applied to stenographic work, at the 1935 convention of the National Office Management Association, Mr. E. H. Conarroe, Director of Management Service, described the plan used by the Metropolitan Life Insurance Company as follows<sup>3</sup>:

After all, centralization is often a matter of degree and I have found it hard at times to classify certain activities as between a centralized and a decentralized set-up. I can cite an example from my own company. We have a large central transcription division. This consists of two sections, the record transcribing unit and the stenographic unit. The former is a completely centralized activity in that this unit handles the transcription of cylinders for the entire home office organization. The stenographic unit serves all of the strictly operating departments of the company with the exception of certain departmental executives.

However, we have several divisions in the company in which the work is of such a specialized or technical nature that it has been found advisable for them to maintain their own stenographic services. Examples of these are the Policyholders Service Bureau and the Real Estate Loan Division. The former is a research bureau, conducted in conjunction with our Group Insurance Division, the function of which is to conduct studies in the field of business management for the benefit of our policyholders. The Real Estate Loan Division is responsible for the mortgage investments of the company. Each of these units has a specialized type of work and employs distinctive terms that

<sup>3</sup> *Convention Proceedings*, p. 64. National Office Management Association, 1935.

are quite different from the standard insurance nomenclature employed throughout the operating departments. Although separate stenographic services are maintained in each of these units which, in a sense, is decentralization, each unit, in turn, operates its stenographic staff on a centralized basis.

**The place of the office manager in the organization.** The place of the office manager in the organization, of course, is a matter which is determined very largely by the way in which the function of office management is defined in a given company. The chart on page 38 prepared by Mr. M. B. Folsom of the Eastman Kodak Company indicates a broad concept.<sup>4</sup> It is worth studying carefully, however, because it indicates clearly the diversity of the office-management activity.

A more specific indication of the place of the office manager was given by Messrs. Keany and Lamb in their study "The Status of the Office Manager" based on the practices of forty banking, insurance, manufacturing, public-utility, and commercial companies, which was prepared in coöperation with the National Office Management Association in 1929.<sup>5</sup> The results of this study are summarized in the sections which follow.

### **To whom the office manager is directly responsible.**

There seems to be a very decided tendency for the office manager to report to the treasurer, vice-president, or the president of the company. This would seem to indicate that the office manager is no longer just a detail man but that he has risen to an important executive position. In only 9 per cent of the cases does he appear to be no more than a chief accountant. This strengthens the impression that the prestige attached to the position is considerable.

<sup>4</sup> Folsom, M. B., "The Field of Office Management," *Handbook of Business Administration*. McGraw-Hill Book Company, Inc., New York, 1931.

<sup>5</sup> Adapted from Keany, Mathew, and Lamb, Philip A., "The Status of the Office Manager," *Annual Proceedings*, pp. 63-70. National Office Management Association, 1929.

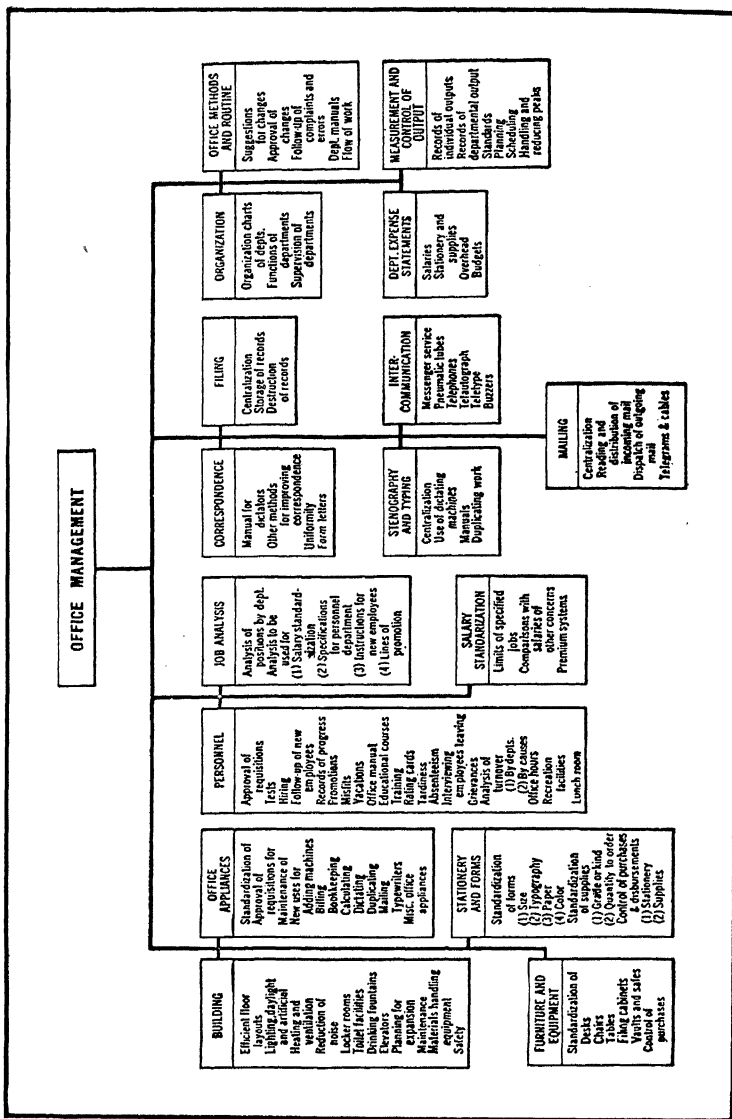


Fig. 1.—Chart of Office Management Functions.

The following table shows the official in the company to whom the office manager is directly responsible:

<i>Official</i>	<i>Per Cent</i>
Treasurer .....	21.2
Vice-president .....	18.2
President .....	15.2
Vice-president and general manager .....	6.05
General manager .....	6.05
Board of directors .....	3.03
Co-partners .....	3.03
President or vice-president .....	3.03
Assistant to president .....	3.03
General manager and treasurer .....	3.03
President and secretary .....	3.03
Director of clerical activities .....	3.03
Auditor .....	3.03
Director of engineering .....	3.03
Assistant controller and general office manager .....	3.03
Secretary .....	3.03

### Official titles held by office managers.

In several of the questionnaire returns the opinion was expressed that the use of the title "office manager" is dying out. Although there are no figures to substantiate this opinion, the fact that the title is used in only 29 per cent of the cases would seem to indicate that its use is far from general. The title "assistant secretary" seems to be the second choice, while "auditor," "office service manager," and "assistant secretary and office manager" are next in rank. Sixteen other titles are used, no one of which occurs more frequently than another. It is evident that as yet there is very little standardization in regard to title. Executives may be opposed to the title of office manager and therefore use another one whenever it is possible to do so.

The following table indicates the official titles of the office managers who were contacted during the course of the survey:

<i>Title</i>	<i>Per Cent</i>
Office manager .....	29.0
Assistant secretary .....	13.0
Auditor .....	5.3
Office service manager .....	5.3
Assistant secretary and office manager .....	5.3
President .....	2.6
Manager of filing department .....	2.6
Secretary .....	2.6
Treasurer and secretary .....	2.6
Chief clerk .....	2.6

<i>Title</i>	<i>Per Cent</i>
Auditor and office manager .....	2.6
Assistant to the chairman .....	2.6
Controller .....	2.6
Manager of the personnel and planning departments ...	2.6
System manager of engineering department .....	2.6
Manager of office methods .....	2.6
Vice-president .....	2.6
General office manager and purchasing agent .....	2.6
Assistant to the president and office manager .....	2.6
Acting vice-president and secretary .....	2.6
Assistant to the vice-president .....	2.6

### Positions held other than that of office manager.

An analysis of the answers to this question shows that the majority of office managers hold other positions. Sixty-five per cent of the forty office managers who answered the questionnaire do part-time work in some other capacity. About one-third of these hold minor executive positions that involve little time. Slightly over one-third hold positions such as director, auditor, assistant secretary, secretary, assistant to the president, and assistant treasurer. The remainder hold other executive positions varying in importance. This analysis indicates that office management may be a part-time position in some cases.

The following table shows the positions held other than that of officer manager:

Number of Companies .....	40
Number of Office Managers Holding no Other Position	14
Office Managers Holding Other Positions .....	26
<i>Position Held</i>	<i>Per Cent</i>
Minor executive positions involving little time .....	33.3
Directors of company .....	12.8
Auditors .....	7.7
Assistant secretary .....	7.7
Secretary .....	5.15
Assistant to president .....	5.15
Assistant treasurer .....	5.15
President .....	2.56
Assistant to vice-president .....	2.56
Vice-president .....	2.56
Credit manager .....	2.56
System manager of engineering department .....	2.56
Controller .....	2.56
Assistant auditor .....	2.56
Purchasing agent .....	2.56
Production manager .....	2.56

### Departments or groups of employees under the jurisdiction of the office manager.

The departments or groups of employees under the control of the office manager are by no means standardized. They vary to some degree with the size, type, and general organization of the business. The most definite statement that can be made on this point is that the filing, mailing, stenographic, and general accounting departments are almost universally under the control of the office manager.

The following table contains a complete list of the departments and groups which were found to come under the jurisdiction of the office manager:

<i>Department or Group</i>	<i>Per Cent</i>
Filing department .....	11.5
Mailing department .....	11.0
Stenographic department .....	9.9
General accounting department .....	8.2
Messenger service .....	6.6
Transcribing department .....	6.1
Telephone and telegraph operators .....	5.5
Printing department .....	4.9
Building maintenance department .....	3.8
Credits and collections department .....	3.3
Janitors .....	2.7
Cashiers .....	2.7
Purchasing department .....	2.7
Auditing department .....	2.7
Billing department .....	2.2
Order department .....	2.2
Payroll department .....	2.2
Office machinery maintenance .....	2.2
Cost accounting department .....	2.2
Office supplies department .....	2.2
Personnel department .....	1.7
Restaurant .....	1.7
Information .....	1.7

### Major duties of the office manager.

The answers to this question covered a wide range, due to the fact that large and small businesses, as well as companies of several different types, were represented. A few significant points, however, stand out. In the first place, the greatest stress seems to be laid on personnel work, while office equipment, office routine, filing, and building maintenance come next in importance, in the order mentioned. Since personnel work today con-

sists of a great deal more than hiring and dismissing employees, it is clear that an important function has been added to the duties of the office manager within the last decade. While the modern office manager still retains control of all the routine duties that he has always possessed, it appears that the new responsibilities which he is assuming, such as the one cited above, are tending to increase the importance of his position.

### Time spent in office management.

The study showed clearly that the performance of the office-management function absorbs a large proportion of the office manager's time. Three-quarters of those covered in the survey spent over 50 per cent of their time on office management work and considerably over half spent more than 75 per cent of their time in this way.

### Tendency for the duties of the office manager to increase.

Out of the twenty-seven answers received to a question dealing with the tendency of the duties of the office manager to increase, seventeen stated that no increase had recently been made, while the other ten said that an increase had taken place. Thus it may be assumed that there is a general tendency for the duties of the office manager to increase. Taken as a whole, the answers to the questionnaires seem to imply that this is true. It may be that the increases are not specific but are added in such a way that their pressure is not felt all at one time. Whatever the case may be, it seems quite certain that the duties of the office manager are increasing and that the position is gaining in scope of authority and importance.

**Rowntree and Company.** The organization structure of Rowntree and Company, a well-known English manufacturing concern, is interesting not only because it was largely developed by Mr. Oliver Sheldon, whose book *The Philosophy of Management* is regarded by authorities as the best work ever written on the subject, but because of the place assigned to office management.

The main functions or divisions of the business are finance, service, labor, production, marketing, and distribution. Finance consists of the accounts, comparison, and purchasing functions; service, of the equipment and re-

search functions; labor is not subdivided; production consists of the production and progress functions; marketing is not subdivided; and distribution consists of the selling and transport functions.

Although office management is nowhere mentioned as a major division or function of the organization, the need for coördination of office activities is clearly recognized. This problem is placed in the hands of an Office Coördination Committee, whose duties are to inspect and coördinate:

1. The selection, training (in office methods), promotion, and transfer of clerical personnel, exclusive of management.
2. The clerical methods employed.
3. The fixing of standards of clerical output and efficiency.
4. The standardization and issue of office machinery, equipment, stationery, and supplies.
5. The layout, both interdepartmental and internal, of all offices.
6. Research in methods of performing clerical work and initiation of new systems.
7. The inspection of clerical work wherever carried out by the company.

From the foregoing it is clear that the clerical work of the organization is not regarded as a separate function, but is allocated to each of the main divisions of the business. The task of the Office Coördination Committee is to study the various clerical methods and paraphernalia, as well as the personnel needs, from the point of view of staff development and standardization, and thus to produce the best results.

In his book *The Philosophy of Management* Sheldon has this to say about clerical work<sup>6</sup>:

There is one general misconception which should be cleared away—the idea that “office work” is a function. Logically, there is no common factor binding different sections of office work together. Different offices are performing different types of work under different functions. In theory, this is normally recog-

<sup>6</sup>Sheldon, Oliver, *The Philosophy of Management*. Sir Isaac Pitman Sons, New York, 1923.



nized; but when it comes to the making of an organization the theory is overlooked, and all office sections, irrespective of basic functions, are herded together under one control. What we must recognize is that clerical work is not a work-function, but the exercise of a specific human faculty employable in any function. Unless we recognize the primary distinction, the resulting confusion may be considerable.

**Departmental operating audits.** One of the duties of the office manager which has become increasingly important in recent years, particularly in larger and more progressive companies, is the responsibility for the establishment of efficient and economical procedures in all departments of the organization, including the office division itself. Work of this type is often referred to as the departmental audit.

#### Value of audits of operating methods.<sup>7</sup>

The major problem of office planning and administration is the thorough, accurate, and systematic accumulation of the facts—all the facts. When they are presented in an organized manner, most of the resistance to change is overcome, and supervision is raised to a higher level.\*

The departmental operating audit offers a technique for fact finding which is scientifically sound and, in the opinion of those office executives who have adopted it, the most effective instrument of office administrative supervision and coordinated planning yet developed. It is but an adaptation of the technique of the financial audit applied to organization and operations. The financial audit accounts for the existence of values and for the receipts and disbursements of cash. The operating audit has to do with an appraisal of men, methods, material, and management, in relation to the values obtained for the expenditure of money. Departmental operating audits can be effectively made a permanent routine of office administration. Such audits should be repeated not less than once every two years—there is probably no single investment which will yield such handsome returns on the money expended.

It is unreasonable to expect such audit work to be performed effectively by a supervisor or department head. His viewpoint

<sup>7</sup> Adapted from bulletins of the Life Office Management Association, issues of March 15, 1936; April 15, 1936; May 15, 1936.

is subjective, and the pressure of routine work makes it impossible for him to assume a detached objective position in relation to his responsibility. Existing office routines, whether bad or good, readily become assimilated into the office operating structure. An obviously cumbersome and uneconomical procedure may, in a short time, become so inconspicuous that its shortcomings will be detected only when exposed to the light of a detailed and comprehensive survey.

### **Departmental audit procedure.**

As is the practice in preparing for a financial audit, the items to be examined should be carefully recorded in the order of the procedure to be followed. The examiner assigned to the audit is presumably qualified to measure, check, and appraise operations, equipment, and personnel as called for in the schedule. He should be assigned to the department under examination and remain until the audit is completed and the report is prepared. He should work closely with the department head or supervisor, and seeming irregularities should be discussed and, if possible, a corrective procedure agreed upon before the report is submitted. The completed report should be reviewed with the supervisor before submitting it to the administrative officer.

### **The examiner.**

It is essential that the person assigned to departmental audit work possess the qualities of analysis, observation, accurate written expression, and ability to pursue the work without disturbance to the organization. He may be a promising young member of the office staff with some experience in methods work, or he may be an "outsider" with methods auditing experience who is brought in for the work. In addition to possessing the peculiar talents essential to this work, the examiner should be familiar with the office management standards by which he will appraise the operations observed. The examiner should report direct to an administrative office of the company, and the program must have the support and active interest of the management.

### **Use of completed reports.**

A detailed audit of a representative department of fifty clerks would require at least one month's time of a single examiner. The completed report will serve many purposes, among the more

important of which are: equitable appraisal of the effectiveness of departmental supervision; suggestions for improvements in methods, equipment, and personnel; exploring the numerous possibilities of economies in all phases of departmental operation; effect on the staff morale; good work "down the line" will not go unrecognized; inferior quality will be detected; the management is provided with the same assurance concerning the quality of work performed as the financial audit certificate provides in relation to cash, securities, and record-keeping accuracy.

### Departmental audit methods of various companies.

While the number of companies which have a formally organized staff, section, or department whose primary function is to make departmental audits or surveys is small, such work is carried on rather extensively in one way or another. In a survey of 263 representative companies with large office forces, conducted by *Managements Methods* in 1932, only 15 per cent had such a separately set up methods-improvement staff.<sup>8</sup> But of these companies, 60 per cent are carrying on such work in some way or other.

Of the entire 263 companies, 80 per cent reported increased recognition of the value of such work. In five companies this work had been placed in the hands of a formally recognized staff within the previous two years, whereas it had not been so placed before that time. The extent of the "increased recognition" of the value of such work varied considerably. In those companies that were affected most seriously by the depression, office forces were found to have been reduced more than in other lines, and the methods staff naturally suffered along with other departments.

### Procedures followed by a manufacturing company.

The plan of a large manufacturing company is typical of the best plans of the larger organizations which have office forces of different sizes in several different locations.

In this company, where the volume of office work warrants, each of the different departments has a separate organization whose main function is to investigate new and present office methods. The work of these organizations throughout the whole

<sup>8</sup> *Management Methods*, November, 1932.

company in coördinated by two committees whose personnel is made up of appointees of the heads of general departments. These committees are functionally responsible to the comptroller of the company and are called the "Office Equipment Standardization Committee" and the "Group for the Interchange of Clerical Information."

### Duties of the two groups.

The Office Equipment Standardization Committee is kept informed of all investigations of newly developed office equipment and of that in present use. This committee frequently initiates experiments and tests of office appliances, assigning such trials to one or more of the operating departments as conditions require. Upon completion, standards are set for such office machines, furniture, supplies, stationery, and paper as best meet the test. The committee supervises the design and distribution of all forms used by more than one department. Information on company standards so selected is published and distributed by the Secretary's department under the title of "Catalogue of Office Equipment Standards." In addition to a complete description of each item, this published information defines as nearly as possible the proper field of use and shows the source of supply and gives ordering information.

The Group for the Interchange of Clerical Information receives data on the activities of groups in the various organizations (1) to prevent duplication of efforts, and (2) to keep all organizations currently informed on new developments.

The Secretary's department is responsible for carrying on at headquarters such services as may be performed most economically and efficiently. An assistant secretary acts as secretary of the two committees mentioned above and often uses the service department that reports to the Secretary as a laboratory for the trial of new appliances or methods.

### Results obtained.

This plan of organization and the studies made have brought large returns in reduced expense and improved service. An outstanding case is that of the centralization of typing and stenographic work (excluding secretarial work). Prior to 1931 the secretary's department had a small centralized typing group. A survey was conducted that year of such work throughout the departments at the headquarters office. After the survey, recommendations were made for the centralization of this work in the

Secretary's department. The recommendations were adopted, and the change has resulted in worthwhile economies and a higher quality of work. The company is well pleased with the plan under which it is operating. The Secretary of the company says, "The experience of the last three years has emphasized the need for, and resulted in further centralization of office management responsibility."

### **Experience of the Nashua Gummed and Coated Paper Company.**

This company has a methods department which does all the scientific analysis work for both the office and the factory. The vice-president is directly responsible, and all methods department work is scheduled by him. The office manager outlines the study he wishes made and submits it to the vice-president for approval.

When the methods department is ready to start, a thorough discussion is held between the office manager and the methods department head. The office manager outlines to the engineer all his ideas for possible ways of improving methods. The engineer then studies and times all those methods, as well as others which may occur to him. From these studies the best way of doing the work is determined at a conference between the office manager and the engineer.

The methods in about two-thirds of the office have been studied and improved and bonus-payment plans have been installed in these same departments.

### **Taylor Instrument Companies.**

This company, which has about 150 clerical workers, has a committee whose duty it is to investigate each department and suggest changes in routine, personnel, and methods. This committee also establishes base rates. The office manager is responsible for the improvement of procedure, for the use of well-devised forms and suitable machines, and for the control and measurement of work throughout the office.

Of the results of this work, Henry W. Kimmel, secretary of the company, says, "The need for such activities has increased during the depression, and the trend has been toward further centralization of office management responsibilities."

In subsequent chapters procedures for surveying and auditing the work of particular departments are discussed in further detail.

## CHAPTER III

### *Selecting an Office Site*

**Importance of proper location.** The question of where an office shall be located, both as to the community and the building itself, is an important one. When one considers that office space in buildings in larger cities costs from three to six dollars per square foot per year, while other quarters—not necessarily far away—may be secured for from one to two dollars, it becomes apparent that careful consideration of the relative advantages and disadvantages of possible sites is important.

Rental cost, however, is not the only factor to be considered. Nearness to allied or associated lines of business, accessibility for customers and employees, provision for future expansion, the reputation of the locality and of the building itself, and nearness to sources of supply and transportation facilities, as well as many other matters of equal importance, must be considered. Moreover, assuming that the office will be located in a building already constructed, the various possible buildings must be considered in connection with the adaptability of the space offered to the layout of the departments and the flow of work. Although in actual practice a compromise is frequently necessary, it is far better to follow the principle of finding space which will be suitable to the existing or proposed departmental layout rather than to attempt to fit the departments, by expansion here and contraction there, into a space which has been selected merely because it is cheap in price or because it commands an excellent view from what will be the chief executive's private office.

**Basic considerations.** In considering the question of office location, thought must first be given to several fundamentals of policy and practice. First of all, in the case of a large organization, there is the question of the building itself. Is it better to build a new building and occupy all or an important part of the space, or rent a building already built? Again, do the space demands necessitate renting all the space now, or is it better to rent only a part of the space available at the present time and to provide in some other way for future expansion? In addition, in the case of a manufacturing company, there is the question as to the best location for the office. Shall the office be located in the same community as the plant? If not, where? If the office is to be at the same site as the plant, shall it be placed in the same building occupied by the manufacturing departments, or shall a separate administration building be constructed? These questions merit careful consideration.

**Erecting a new building.** While it is clear that only relatively large companies are in a position, from the standpoint both of finances and of space needs, to consider the erection and occupation of a new building, many advantages accrue to the company that decides upon this course.

If the company decides to build, it is possible to plan completely the interior layout and construction to suit one's own individual needs, and to provide for future expansion for many years to come in any one of a variety of ways. The home office building of the John Hancock Life Insurance Company in Boston, the home of the New York Life Insurance Company in New York, the General Motors building in Detroit, the McGraw-Hill Publishing Company buildings in New York and Chicago, the Palmolive and Wrigley buildings and the Tribune Tower in Chicago, and the Koppers building in Pittsburgh—all are but a few illustrations of cases in which it has been possible for individual companies to secure these advantages. Banks also are institutions that often occupy entire buildings. The various

Federal Reserve Bank buildings throughout the country, as well as the buildings which bear the names of individual commercial and savings banks, are all cases in point. Generally speaking, banks occupy an entire building more frequently than do business organizations.

One practical method, which is often used in cases where a company constructs its own building but is not in a position to occupy the entire floor space at once, is to arrange some of the floors so that they may be rented temporarily to other occupants. If deemed desirable, the ground floor may be fitted up for store use. By being careful in arranging leases and by exercising a little forethought in construction details, it has been possible, in many cases, to provide adequately for future expansion and at the same time secure a welcome income from the space thus reserved until such time as it is needed.

In addition to securing the construction and layout which the requirements of the business demand, the erection of a new building which bears the name of the company obviously has distinct advertising value. This is true, of course, even though some or a considerable share of the total space is leased to other organizations. In fact, in some cases the company whose name the building bears may occupy only a minority of the total rentable floor space. The RCA building, one of the buildings comprising Rockefeller Center in New York, and the McGraw-Hill building in Chicago are cases in point. Generally speaking, building-management firms, whose business it is to rent and manage large office buildings, are glad to make such arrangements, especially with nationally known companies. In this way not only is the rental of an important amount of space for a considerable number of years assured, but the fact that a well-known organization is going to be located in the building is a distinct asset in facilitating rentals to other equally desirable tenants.



**Renting an old building for exclusive occupancy.** Where the construction of a new building does not seem practical, the suggestion is sometimes made by company executives, or others, that an old building be acquired and completely renovated to meet the needs of the organization. The problem of acquiring and altering an existing building, however, usually presents difficult practical problems. For one thing, there is the matter of obsolescence. Office buildings which are thirty or more years old are generally regarded as obsolete. If, then, a company is considering the advisability of purchasing a building ten years old, it is at once apparent that one-third of the possible life and usefulness of the building has already passed. Recent advances in building-construction methods and the quick public acceptance of such things as air conditioning, soundproofing, and high-speed automatic elevators have tended to accelerate materially the rapidity with which buildings become obsolete. It is well to remember that the office is the "home" of the business, and that the same factors that cause people to demand modern houses are present to the same extent in the case of business buildings.

In addition to the matter of obsolescence of the building itself, obsolescence of the neighborhood in which the building is located must also be considered. Even the most casual observation of the changes which have taken place in practically every city of the country will show that locations that were considered excellent twenty years ago are today quite impossible for business purposes. The acquisition of an old building, therefore, with the thought that the organization will in some way be able to put up with the inconveniences of construction and location, which are apparent even before the building is occupied, is almost always poor economy in the end.

Apart from the question of obsolescence, the problem of making necessary changes to adapt the building to the uses of the new owner is frequently a costly and difficult undertaking. The location of columns, the placing or removal

of partitions, the condition of the wiring system, the location of wash rooms, stairways, elevators, and so on, the size of bays, and a host of other factors are likely to arise and to obstruct, if not to make altogether impossible, the design of a layout in harmony with best modern knowledge and practice.

In a word, the purchase of an old building, or the rental of one for a long period of years, is a step to be avoided, except when unusual circumstances prevail. Even in a new building, changes which should or must be made come quickly enough.

**Occupancy of rented quarters.** The third alternative open to the company seeking a new location is one that is followed in a large majority of cases, namely, the rental of space, either in a new building or in an old one. The major advantages of such a procedure are, of course, the obvious fact that no considerable amount of capital need be tied up in the building itself; the freedom of change in the future, which renting always gives; and the freedom from care and worry, which is the price of ownership in any case.

On the other hand, renting has its disadvantages. It is not always possible—in fact it is usually impossible—to secure exactly the sort of layout that will best fit existing or contemplated departmental arrangements. It is usually necessary, therefore, to fit the organization, to a certain extent at least, to the layout. In addition, the tenant must necessarily rely to a considerable extent upon the promises of the owner or agent in regard to building maintenance and service facilities that will be provided. Those matters for which the tenant is usually responsible, as set forth in the usual office lease, and those for which the owner is responsible, are discussed in a subsequent section in this chapter.

**Selection of the location in the community.** Assuming that a company is going to occupy rented quarters, as is usually the case, the location in the community must be selected. A number of factors are of particular importance,

among them being the reputation of various locations or neighborhoods in the city, probable future developments in the section under consideration, nearness to service facilities, and convenience of location for employees.

**Neighborhood reputations.** Neighborhoods, like individuals, have reputations. It is often of the utmost importance that the office be located in the "right" part of town. A very brief and simple analysis of the various business districts in any city will show clearly that each is thought of in connection with a particular line of business. For example, in every large city there is the retail or shopping district, the wholesale district, the financial district, the residential district, and so on. These, in turn, are often subdivided into zones, which are associated with specific classes of trade. For example, Fifth Avenue and Madison Avenue above Forty-second Street, in New York City, are generally regarded as the exclusive shopping districts. The location of the Saks Fifth Avenue Store at the corner of Fifth Avenue and Fiftieth Street marked the beginning of a distinct tendency for the higher-class stores and specialty shops to locate on Fifth Avenue between Forty-second and Fifty-ninth Streets. The fact that McCutcheon's, an old-established linen store located for many years at the corner of Thirty-fourth Street and Fifth Avenue, moved to Fifth Avenue and Forty-ninth Street in 1926, a distance of only fifteen blocks, indicates very clearly the importance of location in this case.

The business sections of New York City also have their specialized reputations. Maiden Lane, a narrow street in downtown New York, has for years been the center of the jewelry trade. John Street for a long time has enjoyed the reputation of being the center of the insurance brokerage business. Wall Street, of course, one immediately associates with financial institutions of all kinds.

Similar situations exist in almost every large city in the country. The Loop, so called because the tracks of the elevated railroad completely encircle it, comprises the heart

of the business and financial district in Chicago. Within the Loop, in turn, there is further specialization. La Salle Street is the Wall Street of Chicago. Most of the leading department stores, including Marshall Field, Carson, Pirie, Scott and Company, and The Fair, are located on State Street. On Michigan Boulevard are some of Chicago's finest specialty shops, as well as many of the newer office buildings. In San Francisco, Market Street is the principal business thoroughfare. The leading financial houses are located on Montgomery Street, while the wholesale district is concentrated on lower Mission Street. Numberless additional illustrations might be given to show that a very distinct although invisible line divides the business life of any city into a number of component parts.

**Forecasting future neighborhood changes.** The present reputation of a neighborhood, however, is not the only matter to be considered. In fact, it is just as important that the probable changes in the neighborhood during the coming years be taken into account and estimated as accurately as possible, as it is that the present reputation be given consideration.

A specific illustration will indicate very clearly the disastrous results which are bound to follow when future changes are not given proper weight. In this case the home office of a nationally known financial institution was located in what was formerly the residential district of a mid-western city. The ground was cheap, there was plenty of light and air, and there was no reason to suppose that for an indefinite period of time the institution would not be able to meet all of its requirements in an effective manner in the location chosen. After the lapse of a very few years, however, the situation changed so materially that the entire character of the neighborhood deteriorated, and it is now completely inundated with light manufacturing establishments, as well as settlements of large groups of industrial workers. It is a foregone conclusion that this institution, which is rapidly expanding, will be obliged to

move in a very short period of time to another location where it will be in surroundings adapted to the character of its business and likely to hold the type of employee which the institution seeks to attract.

**Nearness to service facilities.** Offices depend to a large extent upon a variety of service facilities made available to them by various outside agencies. For example, little business could be transacted without the use of the mails. Where the volume of correspondence is considerable, as in an insurance company or a mail-order house, nearness to the post office or its substations is of considerable practical importance. Similarly, proximity to express offices, to railway terminals, to district offices of the telegraph company, to office supply houses, and to other outside service agencies, is desirable. While this group of factors may perhaps, in general, be regarded as relatively unimportant, they must always be taken into consideration in choosing an office site.

**Convenience to employees.** In office location the convenience to employees in going to and from work is not always given the consideration which it deserves. Every office manager will realize, after a moment's consideration, that employees select positions and stay longest, other things being equal, in those offices which are most conveniently situated with reference to their homes. One well-known office organization, for example, is located in an eastern city in a wholesale district, inconvenient to reach for anyone coming to it from almost any part of town. In a number of cases employees are known to have accepted positions with the company only until they could find work in an office located more conveniently to their homes. The net result is that the company has found it necessary to pay something more than the current market rate in order to make the employment opportunity an attractive one.

**Advantages and disadvantages of suburban office location.** In some cases the question arises as to whether a city or a suburban location for an office is better. The principal

advantages and the disadvantages of a suburban location may be summarized as follows<sup>1</sup>:

*Advantages:*

1. Quiet, pleasant working surroundings.
2. Cheap land and low taxes, or low rents.
3. Room for expansion when needed.
4. Freedom from parking problems and restrictive ordinances.
5. Possibilities of capitalizing location on letterheads, in slogans, associating company name with new community, etc.

*Disadvantages:*

1. Difficulty of securing skilled clerical employees.
2. Difficulty in assuring adequate transportation for employees and for supplies.
3. Inadequacy of banking and investment facilities.
4. Decreased opportunity for executive contact with other organizations.

While each situation must be decided, of course, on its own merits, the number of offices which are located in the suburbs is relatively small. Unless unusual factors exist, a city location is much to be preferred.

**Selection of the building itself.** Having decided upon the general neighborhood in the community in which office space will be sought, there next arises the question of selecting the particular building in which to locate. In this connection at least four factors must be taken into consideration: (1) the rental-cost factor; (2) the adaptability of the present arrangement to the present or proposed departmental layout; (3) the service facilities of the building, such as elevator service, both passenger and freight, janitor service, maintenance service, and so on; and (4) the character of the other tenants. Each of these factors deserves further specific consideration. With the exception of the third, which is discussed in detail in the following chapter, they are considered below.

<sup>1</sup> Bengé, Eugene, *Cutting Clerical Costs*. McGraw-Hill Book Company, Inc., New York, 1931.

**The rental-cost factor.** By far the most important point to be borne in mind in connection with rental cost is the fact that the cost per square foot is not the only price of occupancy paid by the company. Consequently, space at three dollars per square foot may, upon analysis, be found to be just as cheap if not cheaper, in the end, than a site located elsewhere renting at two dollars and a half per square foot. A case in point of the effect of an error in judgment in this matter is to be found in the example of the office organization cited in the section (page 55) dealing with neighborhood changes.

**Adaptability of space offered to layout.** As has already been stated, a fundamental principle of good office location and layout is to select, as far as it is practical to do so, space which can be adapted readily to layout requirements, rather than to attempt to reverse the process by forcing the layout to adapt itself to a given space which is already arranged in a certain way. A smooth and continuous flow of work between the various departments comprising the office is essential to handling the work with dispatch. This important subject is discussed fully in Chapter V.

**Character of other tenants in building.** Just as neighborhoods within a community have reputations, individual buildings carry with them prestige, or the lack of it. While it is true that real estate operators and brokers attempt to build up a certain reputation for a building and then utilize it in selling space, it is nevertheless a fact that the reputation and character of the building in which a company is located may well be a distinct asset or a definite liability.

The nature of the business of present tenants is the principal factor which makes or breaks the reputation of a given building. It is not very pleasant, for example, for customers who have occasion to visit the company offices to have to take their turn with a miscellaneous assortment of boxes and bundles on a combination freight and passenger elevator in order to reach their destination. Yet, if one locates an office in a building in which even light manufacturing

is permitted, this may be the result. Well-appointed lobbies, good elevator service rendered by well-mannered personnel, and clean floors, all contribute to the general impression which the building makes on prospects, customers, and employees, and all have a direct effect on the good will which the business enjoys.

**Selection of space within the building.** The floor and the part of the building in which the offices are located is well worth while considering. An eastern exposure is usually considered the best; a northern, the second choice; a southern, the third; and a western, the least desirable of all. The upper floors, say, the fifth floor or above, are, of course, regarded as more desirable, and consequently are more expensive, because of the better natural light and ventilation, as well as the smaller amount of street noise that reaches them.

In one case which recently came to the writer's attention, it was necessary to both soundproof and air condition an executive's office, at a cost of some \$1300, simply because its location on the third floor, with southern exposure, facing a principal business street on which trolley cars operated, made it too noisy for conversation when the windows were open, and unbearably hot when they were kept closed.

The frequency with which customers and others call at the office is also a determining factor in selecting the space in the building to be occupied. Obviously, for example, no bank would consider a location on the upper floors of a building.

The opportunities that various possible locations within a building offer for future expansion is also an important point to consider. In planning a new location a company should provide definitely for the growth of the business for five years at least. It is also generally true, in the case of office organizations whose business is growing at a normal rate, that space requirements double at least every ten years. Consequently, space taken on floors in which additional offices will be available in the near future, rather



than on floors where the balance of the space is rented for a number of years in advance, is preferable.

**Location of executive offices of a manufacturing company.** Industrial executives have given considerable attention to the question of whether, in general, better results are secured when the administrative or executive offices of a manufacturing company are located at the factory, or at a point some distance from it. This matter is especially important when the plant itself, because of specific conditions, such as nearness to a good labor supply, nearness to raw materials, nearness to markets, low taxes, or superior transportation facilities, is located in the country or in a town which is difficult to reach.

Decision on this point depends very largely upon the ability of the company executives and office departments to coördinate their work successfully. There is also the question of the ability of major executives to secure and maintain adequate control over, and information about, activities at the plant. Although each case is a problem in itself, and no general rules can be laid down which are universally applicable, the tendency in recent years has been toward locating the executive offices and the plant at the same point. The advisability of this procedure is emphasized by the fact that in a number of cases companies whose offices were formerly located at a distance from the plant have later deemed it advisable to move to the plant itself.

**Use of a weighted table to determine the best location.** As a practical aid in arriving at an equitable decision regarding the best office location, and more particularly as a help in giving the various factors involved the proper relative weight, the use of a simple table, as shown in Figure 2, will be found helpful. The procedure for preparing and using such a table is simply to list in the left-hand column, as shown, all of the factors which in any way influence the choice of the site. Each main group of factors is then given a weight, thereby enabling evaluation of all factors in terms of one another. For example, convenience to customers

would obviously be an outstanding factor in the case of a retail-store location, and thus would be given a greater weight than any other single factor, and very possibly as much weight as all other factors combined. On the other hand, the question of convenience to customers in the case of a mail-order house would be of practically no importance, but nearness to railway, express, and mail facilities would be of the greatest importance. For the sake of convenience, the total weight assigned to all factors may be arbitrarily fixed at 100.

Location Factors	Weight	Location A	Location B	Location C

Fig. 2.—Location Table.

Having decided upon the total weight to be allowed each factor, the next step is to evaluate in accordance with one's own opinion the worth of the various sites under consideration. For example, assume that Columns A, B, and C in the form represent three possible locations. If nearness to outside service facilities carried a total weight of fifteen, one might assign a weight of eight to location A, ten to location B, and thirteen to location C, thus indicating that while none of the sites are regarded as perfect from the standpoint of nearness to service facilities, site C is better than either A or B. The last step, of course, is to total

the individual weights in each of the columns and determine the one nearest the ideal location, that is, 100 points.

**Features of an office lease.** When the building itself and the space within the building have been selected, the next step is to take care of the legal matters connected with the leasing of the office. While this is a matter that in most cases the company will wish its lawyers to look into, it is desirable that the office manager have at least a general knowledge of the usual provisions of a lease covering office space, and of those things for which the owner is responsible and those for which the tenant is responsible.

Among the points which leases for office space usually include are the following:

1. Names of the parties to the contract.
2. Date of the contract.
3. Date and sometimes the hour at which the term begins and expires.
4. Description or designation of the space leased.
5. Rental and method of payment. Usually the annual rent is stated, subdivided into smaller units to be paid on specified dates.
6. Provisions regarding the rights and obligations of each party and what will be held to nullify the contract.
7. Signatures of both parties to the contract.
8. Acknowledgment before a notary if required by statute.

The items which the owner is expected to provide and those which the tenant usually provides are shown below:

<i>Provided by Owner</i>	<i>Provided by Tenant</i>
Elevators	Conveyors
Washrooms and toilets	Floor coverings
Lighting fixtures and wiring	Buzzers and annunciators
Radiators	Intercommunicating telephones
Window shades	Ventilators and fans
Fire-protection apparatus	Awnings
Fireproof stairways	Clocks
	Water coolers or fountains
	Storage vaults
	Partitions and railings

**Moving the office to the new location.** Having selected the site and signed the lease, the last step is to move the office from the old location to the new. Plans for moving an office should be preceded by the preparation of a template layout showing the position of each piece of furniture and equipment in the new location. The subject of office layout, however, is taken up in detail in Chapter V, and the discussion here, therefore, is confined simply to the work of moving.

Assuming that the proposed layout has already been decided upon, and that it has had the approval of the department heads and other executives, the first step is to tag each piece of furniture and equipment in the present office and to number each template on the layout chart accordingly. This gives those in charge a definite plan on which to work. In this connection it will be found helpful to assign a general number or letter to each room or bay in the new location. If more than one floor is to be occupied, the floor number should, of course, also be indicated. Thus, for example, in moving an office of any considerable size, the movers learn, after two or three trips, which location "14-A" is, and consequently know at once the general location of any particular piece of furniture. The specific place where each piece of furniture and equipment is to go, as shown on the chart, is then given them by the office manager's assistant in charge of that room.

A week or more before the day set for the actual moving, the office manager should provide each clerk with a set of specific detailed instructions which will tell him just what he is expected to do and how it is to be done. These instructions should include such information as how papers and miscellaneous desk equipment are to be packed and marked, where packing materials are to be secured, what disposition is to be made of the completed packages, how desk drawers are to be locked or fastened in place, and so on. Similar instructions should also be prepared and issued to department heads and section supervisors; but naturally

in this case more information will be given, together with a carefully worded request for their coöperation.

When these preliminary plans and instructions are completed, the office manager should select a sufficient number of competent persons to assist him and to act as guides for the movers on the moving day. These assistants may or may not be employees who are regularly under the supervision of the office manager, but they should be chosen with the qualities of ability to follow instructions, cool-headedness, and initiative uppermost in mind. The general plans, as well as the specific part which each one is to take in the moving, should be thoroughly and carefully explained to each one. Enough such assistants should be chosen so that there will be at least one man in every room in both the new and the old location, as well as one or two extra men for general purposes.

No matter how carefully thought out the preliminary plans may seem to be, there are almost always difficulties that may delay or even seriously upset the execution of the plans. Experienced office-moving companies can easily point out possibilities in this direction, particularly if their contract is for the job as a whole rather than by the hour. In addition, the office manager will do well to ask other office managers who have been through the experience before what unforeseen difficulties they encountered. While it is perhaps too optimistic to hope that all such contingencies will be foreseen and provided for, nevertheless, it is true that the more careful and scientific the planning, the fewer the chances of unforeseen difficulties interfering with the carrying out of the plans.

**What to do on moving day.** The work to be done by the office manager himself on moving day consists largely of supervising the execution of the prearranged plans. If the move is to be made between Saturday noon and Monday morning, as is sometimes the case, presumably only the office manager and those whom he has selected as his assistants will be on hand. If, however, it is necessary to move

on a week day, it is best to dismiss the whole force for that day rather than to attempt to utilize their services in the moving process, as generally they will be more of a hindrance than a help.

It is important that during the moving day the office manager himself stay in one place, or at the most divide his time between one definite location in the new place and another in the old one, so that his assistants will know where to reach him quickly if his advice is needed, as it surely will be. Anyone who has moved an office or assisted in that task will appreciate the difficulties which are almost sure to arise when there is but one person who can be called on for instructions to cover special cases, and, because he is constantly rushing back and forth between the old and the new locations, decisions must be delayed and men kept waiting until he can be found.

One practical plan is for the office manager to appoint one person as his first assistant. The office manager can then take general charge of the incoming equipment in the new location, leaving his assistant to supervise the movement from the old location. At the end of three or four hours the office manager should make a check-up on the equipment which still remains in the old office; at this time he can change places with his first assistant if that seems desirable.

When the movers have reported the last piece of equipment moved from the old location and placed in the new one, the office manager should verify this statement by a personal inspection. If conditions are found to be satisfactory, he is then ready to perform his last duty in connection with moving, namely, that of seeing that the mechanical equipment, such as telephone connections, buzzer and internal communicating systems, electrical office equipment, and so on, is in working order.

If the change of office location is being made between Saturday noon and Monday morning, the moving itself will, in most cases, be completed by Saturday evening, leaving

the office manager all day Sunday in which to attend to these mechanical adjustments. Overtime rates for electrical and other skilled mechanics are, of course, rather high; but the office manager will be more than justified in including in his estimate of moving costs the wage of at least one competent mechanic and his helper, so that the necessary connections may be made before Monday morning. The cost of time lost by clerks and delays in getting the work started promptly in the new location will be found to be far in excess of any reasonable outlay for mechanics' wages for overtime work.

Theoretically, it should be possible to pick up the threads, so to speak, on Monday morning in the new location, just where they were laid down the previous Saturday noon in the old office, and thus continue the work in the usual way. One occasionally even reads descriptions of changes in office location which are said to have worked out so perfectly that no time was lost. Practically, however, some delay and lost motion is inevitable, even if it is only the time which the clerks feel forced to spend in discussing the new quarters.

## CHAPTER IV

### *Physical Factors in Office Planning*

**The importance of physical factors.** In choosing an office location, and more particularly in planning the interior layout, it is essential that adequate consideration be given to what are usually called physical factors. These include the size and the shape of the building, building facilities, storage facilities, lighting, heating and ventilation, including air conditioning, floors, floor coverings, communicating systems, partitions, noise-reducing facilities, and electrical facilities, as well as office maintenance. Although certain changes can be made, of course, after the space is occupied, each of these points should be carefully considered at the time the layout is being planned. Because of their importance, this chapter will be devoted entirely to a discussion of physical factors, while in the next chapter consideration will be given to making the office layout itself.

**Size and shape of the building.** There are several important factors regarding the size and shape of the structure itself which should be considered by any company which is planning the erection of a building of its own. Even if any substantial amount of rented space is to be occupied, they should be given careful consideration.

In deciding upon the amount of space needed, the total number of square feet is by no means the only consideration. Large rectangular areas obviously are preferable to long, narrow spaces, or to a series of small odd-shaped spaces. The shape of the building itself is also important. Buildings having the general shape of the letters U, H,



T, or E are considered most desirable, both from the standpoint of their adaptability to the best interior layout and in connection with opportunities for future expansion. Moreover, such shapes insure maximum lighting and ventilation. Floors should be planned to facilitate the joining of several sections to meet expansion requirements, or, where adjoining ground is available, provision for the future may be made by planning so that additional wings may later be added. In other cases, provision may be made for the addition of stories.

**Building facilities.** Building facilities include freight and passenger elevators, wash rooms, toilets, and locker rooms.

It is almost trite to say that passengers and freight should not be carried on the same elevator. Convenience to employees and customers, and greater dispatch in handling both passengers and freight, as well as a vastly better impression on callers, are all obvious advantages of making this separation.

The problem of providing adequate passenger elevator service in an office building, however, is not always a simple one. This is particularly true in buildings occupied entirely by a single company, because in such cases there is a distinct tendency towards concentration within a very limited period of the time of arrival and departure. In one case, for example, congestion around the elevator entrances on the ground floor became so great that a rather serious problem of lateness developed. Investigation showed that sometimes as much as ten minutes elapsed between the time an employee arrived in the building downstairs and the time she was actually seated at her desk ready for work. As a result, a stagger system of departmental working hours was put into effect whereby certain departments started work at 8:30 and left at 4:30, others commenced at 8:45 and stopped at 4:45, and so on to the last group, who arrived at 9:15 and left at 5:15.

In large buildings the problem of congestion is usually

satisfactorily solved by providing several banks of elevators, each of which serves only a given series of floors. Modern elevator equipment, including high-speed electrically operated cars, automatic door-opening and closing devices, and electric control mechanisms, whereby the car stops only on the floors from which a waiting passenger has signaled, also has materially increased both the capacity and speed of elevator service. One method frequently used effectively to modernize older office buildings is to install new elevator equipment. The leading elevator manufacturers have accumulated considerable worthwhile data on the subject of elevator arrangements, speeds, capacities, and so forth, and are always glad of an opportunity to co-operate with a present or prospective user of their equipment.

**Coat rooms and lockers.** The use of coat rooms, either centralized or provided for departmentally, in contrast to the advisability of installing lockers, is a debatable point. It is generally agreed that the decentralized coat room or locker arrangement, rather than the plan under which all employees check their wraps at a central point, is preferable, especially in view of the fact that a better control over the time spent by employees in getting settled down in the morning and preparing to leave in the evening is secured. The majority of buildings erected within the last few years have the decentralized or departmental arrangement. -

Lockers provide perhaps the best method of taking care of coats and hats of employees in medium-sized or small offices. Any disadvantage due to the amount of floor space required may be largely overcome by use of a type of locker which consists of a group of three units and measures fifty-four inches in length, twenty-one inches in depth, and six feet six inches in height. Since the three units will comfortably take care of the belongings of eight people, it is apparent that less than one square foot of space per person is required.

**Wash rooms.** The decentralization of wash-room and toilet facilities, so arranged as adequately to serve the needs of adjacent departments, is also regarded as the best practice, owing, again, to the closer control which can be exercised by department heads or section supervisors over the time spent by employees away from their desks. In no case should it be necessary for any employee to go more than one floor away to reach these facilities.

**Storage facilities.** The need for storage facilities is very frequently underestimated in calculating the total amount of space needed and the layout of departments within the space. Indeed, it may be truthfully said that the intelligent use of storage space frequently makes the difference between an orderly and effective office layout and one which is cluttered up so badly as to make expeditious procedure almost out of the question. If a new building is to be constructed, the entire space below the ground floor should be reserved for storage purposes, and the temptation to divert this space to the use of clerical employees should be discouraged. When space already constructed is being rented, however, there are a number of other devices which may be employed to give additional storage space. For example, if counters are necessary, counter-height file units may be installed, the space behind and under the counter being used either for vertical filing purposes or as storage space for miscellaneous supplies, depending upon the uses which the counter serves and the type of equipment bought. In the same way space over wash cabinets, clothes cabinets, and telephone booths can be built over for storage purposes without detracting from the appearance of the room. These suggestions are based on the obvious fact that while a company pays for square feet, it actually gets cubical content.

**Office lighting.** It is well recognized that the best possible light is daylight. Offices which have the largest amount of natural light, therefore, command a higher rent than those less favorably located. Twenty-five to fifty

per square foot per year often represents the charge for daylight alone. However, since natural light sufficient for working purposes is available in an office building only at certain times and in certain places, it is necessary to supplement it with some form of artificial lighting.

Three general types of artificial lighting are used in offices:

1. *Direct lighting.* The best example of this type is the individual desk light or the ceiling light with the ordinary reflector, which diffuses all of the rays downward. Such lighting arrangements are considered the least satisfactory, owing principally to the fact that there is almost sure to be a glare of some sort on the working surface. Many people, however, seem to feel that it is necessary to have a large quantity of light on the working surface. They fail to realize that quality as well as quantity must be considered. In addition, individual desk lights not only detract from the appearance of the office, but the cost of installing the necessary equipment and placing the outlets, as well as the cost of current consumed, is generally more than the cost of an adequate system of overhead lighting.

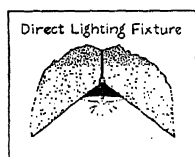


Fig. 3.

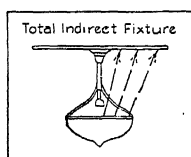


Fig. 4.

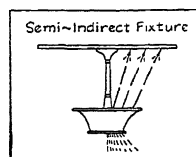


Fig. 5.

2. *Total indirect lighting.* In this case the fixture throws the light against the ceiling, from which it is reflected down on to the desks, none of the light being allowed to pass directly downward through the fixture itself. While it is true that this plan provides for a fairly even distribution of light, its success, obviously, is largely dependent upon the maintenance of a high quality of reflective value within the lighting fixture itself as well as on the ceiling.

quently encountered when a person looks at glossy paper, polished metal or wood, or other shiny surfaces. It is especially harmful because the eye is often subject to it for long enough periods of time, thus producing eye fatigue which may lead to permanent injury.

**Other factors affecting lighting.** In considering the problem of office lighting, it should be borne in mind that even an acceptable general lighting system does not entirely solve the problem. Two specific examples indicate the practical problems encountered in connection with office lighting.

The first case was that of a department in an insurance company where the work consisted of checking applications. This work requires good illumination with even distribution. The ceiling was white and the walls were cream color. A fixture that would keep maintenance and cleaning costs at a minimum was desired. After considerable investigation, a direct totally inclosing glass was decided upon. An eight-candle-foot intensity was necessary, and to produce this approximately 1.5 watts per square foot was required. The ceiling was twelve feet high, and the room was laid out in twenty-foot bays. Outlets were arranged four to a bay and placed on the corners of a ten-foot square. Fixtures were placed nine feet above the floor, the working surface being thirty inches in height. One-hundred-fifty-watt lamps were used. As a result of these arrangements, an even distribution of light and an eight-candle-foot intensity was secured.

The experience of another company in one of its departments which had considerable overtime work illustrates the danger of drawing conclusions until one has made a thorough analysis of all the factors involved. The clerks in this department were unanimous in complaining of eye strain due to insufficient candle power. The lamp wattage was increased without any appreciable result in reducing the strain. Then it was noticed that the data from which these clerks were making computations were written in indelible pencil, which reflected the light unevenly

and made it difficult to read the figures. The data were written in a semi-soft black pencil, and the clerks immediately noticed a decided improvement in the conditions. Such a problem also emphasizes the importance of studying the color of paper used and the nature of its surface in connection with its light-absorbing or light-reflecting qualities.<sup>3</sup>

**Improving existing equipment.** If tests show that existing illumination is unsatisfactory, attempts should first be made to utilize present fixtures before consideration is given to new fixtures. The following are some of the principal methods of attack<sup>4</sup>:

1. Clean luminaires more often. Experiments have shown that a two-weeks' accumulation of dust on an indirect fixture will cut down the light as much as 40 per cent.
2. Provide better reflecting surfaces; clean or repaint ceilings and walls; remove dust and soot from shades, furniture, floors, and so on.
3. Replace dimming lamps; experiment with clear, frosted, and blue glass lamps.
4. Relocate desks receiving poor illumination.
5. Lower fixtures (but not at the expense of glare); if totally indirect, try raising fixtures.
6. Increase the number of ceiling outlets—especially to be considered where a severe drop in intensity at points half-way between fixtures (uneven distribution) has been demonstrated.
7. Increase wattage—but consult the electrician first to be sure that the circuit can stand an increase.
8. Avoid glare, either direct or reflected; facing windows; too light-colored window shades; reflections from glass desk tops, glass partitions, polished metal; individual desk lights, and so on.

**Heating and ventilation.** The fact that the proper heating and ventilation of an office have a direct effect upon the health and efficiency of office workers is well recognized. The matter of heating is usually well taken care of, except that there is a tendency to overheat offices. The ideal tem-

<sup>3</sup> Wood, George D., "Capitalizing Physical Conditions," *Annual Proceedings*, p. 13. National Office Management Association, 1933.

<sup>4</sup> Bengé, Eugene, *op. cit.*

perature for an office is sixty-eight degrees F. The development of methods of thermostatic control has largely done away with the exercise of individual preference in heating on the part of the clerk who happens to be sitting nearest the radiator valve.

Office ventilation, on the other hand, is still a complex problem about which there is yet much to be learned. Fundamentally, the problem of the ventilating engineer is to introduce an abundance of fresh air, to provide means for removing foul air, and to maintain a constant circulation of air without creating a direct draft. The fact that correct ventilation is important, however, is shown by the experience of a number of companies. For example, one concern computed the approximate loss involved through colds contracted by its employees, largely as the result of faulty ventilation, at twenty-four dollars per employee. Another manufacturer reduced the amount of winter sickness among his employees from 27 to 7 per cent by installing a ventilating system, after a thoroughly scientific survey had been made. In a third case, a New York banking institution, by furnishing proper atmospheric conditions, increased the output of each individual employee sufficiently to allow a reduction of 4 per cent in the working force.

**Air conditioning.** While air conditioning is by no means new, it is only within the last few years that it has been adopted to any great extent by business organizations. Today, however, it is not at all uncommon for one office manager to ask another whether his office or building is air conditioned. When the construction of a new office building is being considered, the question of air conditioning is given the most careful consideration. An increasing number of new buildings are being air conditioned.

While the installation and operation of an air-conditioning system are highly technical matters with which it is not usually expected that the office manager will be thoroughly conversant, he should be familiar with the types of systems available and the factors which constitute fixed and operat-

ing costs. The following material treats these subjects briefly and in a non-technical way.<sup>5</sup>

### Types of available systems.

There are several types of equipment which can be used for air conditioning an entire multi-story building:

1. A compact unit, containing cooling coils, air-circulating fans, and a condenser unit for removing the heat from the cooling coils, may be installed in each office to serve that space alone.

This type of equipment has the advantage of the maximum amount of flexibility. It can be installed in one or two offices at a time, if desired. The occupant of the office has control over the equipment and can turn it on or off in accordance with his wishes.

However, in installing this type of equipment in an entire multi-story building, certain disadvantages must be considered. Each unit requires an electric motor of about  $\frac{1}{2}$  to  $1\frac{1}{2}$  horsepower, and the combined load of these motors often may be sufficient to require extensive re-wiring of the building. Outside air intakes are essential and may present construction and operation difficulties. Cooling water for water-cooled condensers may put an undue strain on the supply and drainage facilities from the various offices. These units do not adequately solve the ventilation problem, particularly in offices with a high human occupancy. The maintenance of the many individual fans, motors, and compressors may become a serious problem and require considerable time and expense. While this type of equipment is entirely applicable for a few offices in a building, it has been found generally that another type of system is better adapted to multi-story office buildings.

2. For each office may be used a type of unit similar to that just described, but with the refrigeration equipment located outside of the conditioned offices, to furnish cold water to the cooling coils of the units. This type of equipment has the advantage of fewer refrigerating machines and quieter operation in the office. The disadvantages mentioned above, including inadequate ventilation, may still apply, but to a lesser extent. This sort of installation is particularly applicable to the larger tenant having several individual offices in his suite. Both this

<sup>5</sup> Adapted from Davidson, P. L., "Cost of Air Conditioning in the Office," *Annual Proceedings*, pp. 111-118. National Office Management Association, 1935.



system and the self-contained unit, however, if extended to the entire building, occupy in the aggregate more space than a system using a central apparatus with a duct distribution system.

3. The next type of system is that in which all the refrigeration and conditioning apparatus is located on one floor and the conditioned air distributed to the offices through ducts. The only apparatus necessary in the office itself is the air-distribution outlets, so placed as to provide proper diffusion of the conditioned air. When installed in an entire building, this type of equipment has the advantage of making possible the conditioning of one floor at a time, thus spreading the initial investment over a longer period. Also, as compared with the complete unit in each office, there is the advantage of being able to use for the apparatus space which has a minimum rentable value. If several floors were to be conditioned eventually, the refrigeration apparatus would logically be placed at some central point, probably in the basement, and cold water would be circulated to the various floors. The water supply and drainage could be more easily handled from such a location, and electrical facilities would be less costly to install.

4. Usually, it is less expensive in conditioning an entire building to use a central-station system, wherein the refrigeration and conditioning apparatus is located at some central point and the conditioned air distributed to the various offices through ducts. In such cases it is best to place the machinery at a point about midway between the ground and the top of the building, and distribute the air both up and down to the various areas. In one thirty-three-story building, one such station on the twentieth floor serves all the floors below from the sixth to the nineteenth, inclusive, and all the floors above to the thirty-third, the top floor. The conditioned air is carried through vertical flues to individual re-circulating fans on each floor. The refrigeration apparatus is located in the basement.

This type of system has an advantage in requiring a minimum amount of rentable space. It can be easily fitted into an existing building, and can be blended with the decorative appearance of the offices. The vertical flues and individual fans on each floor take up a very small amount of space. In some buildings, all ducts have been placed outside of the building or in an interior court, and only the re-circulating fans themselves placed in the building proper. In a multi-story office building in New Orleans, in which the ducts were plastered in, they appear to be part of the building structure itself, and no one would realize that the air-conditioning system was added after the building was ten

years old. The machinery can also be grouped in one or two locations, making easier and less costly maintenance possible.

5. A type of system called the Weather-Master, which consists of a central refrigeration and air-conditioning plant supplying conditioned air through vertical ducts around the exterior of the building to distribution cabinets under each window, has been used in many new multi-story buildings. This system eliminates the horizontal ducts, replacing them with small vertical risers, and also eliminates the re-circulating fans on each floor.

This system is best adapted for new building construction, owing to the fact that for best results it is desirable that the conditioning apparatus be located at about every ten floors. The units combine heating facilities with the conditioned air in the units, and are located under the windows where there are the severest conditions of heat transfer. If the system is designed with the building, the ducts on the exterior occupy little more space than a conventional steam-distribution pipe system. It is essential that there be a proper combination of the cooled and re-circulated air in the units, because for economically small ducts the air must be cooled considerably below the room temperature; consequently, there must be a proper diffusion of this air with room air to reduce the differential so that objectionable drafts will not be created.

The smaller industrial or merchandising office building, ranging in height from one to four stories, does not present such a complicated problem for air conditioning. A central plant may be located either in the basement or on each floor, and the air distributed through overhead ducts to the various portions of those areas.

### **Air-conditioning costs.**

Several factors are involved in determining both the initial cost and the cost of operation in office and office-building air-conditioning systems. Each area to be conditioned requires individual study to determine whether or not there are special conditions which will affect the type and extent of equipment needed to furnish true air conditioning. Some of the following factors serve to indicate the care which must be taken in such study.

#### *1. Basis of equipment size and cost.*

Geographical location and directional exposure of the building are important. In those localities where there are protracted

spells of hot, humid weather, both the size of equipment and the time of operation are increased over those locations where the climatic conditions are less severe. There may be a difference of 50 per cent between different localities in the time during which the refrigeration equipment must be operated to counteract the adverse climatic conditions. In one locality it may be necessary to operate only 1200 hours during the year, about three months' operation at ten hours a day. In other cases it may require 1800 hours to furnish comfortable conditions. It is not unusual to find that the outside conditions will vary considerably within a distance of only fifty miles, so that in one city the conditions may be unusually favorable to economy of operation, and in another city, comparatively nearby, the operation expense may be considerably more. The location of the building itself within the city is also an important factor. A building which has a direct exposure of the sun during a large part of the day obviously will require greater capacity of equipment and longer operation than a building which may be shaded most of the time from the direct sun rays.

## *2. Size and shape to be conditioned.*

At first thought, it might seem that two spaces having the same areas and volume would cost the same for equipment and operation. This is not the case because of the effect which the shape of the space has on the conditioning. A difference occurs between one area of rectangular shape and another of an H or a U shape. The ratio of wall surface to floor area may be as much as 20 per cent more in the latter cases. Inasmuch as the heat passing through the windows and walls is one of the important factors in the total heat load in an area, it can be seen that such a difference in the amount of wall and number of windows will greatly affect the equipment size and costs of operation. The ceiling height also may make a considerable difference in the initial and operating costs of air conditioning.

## *3. Type of building construction.*

The type of building construction of the area to be conditioned plays a very important part in both initial and operating costs. Some types of wall construction are very porous, while others are highly resistant to the passage of heat. In addition, some windows may set loosely in their framing, allowing a passage of air around them, which increases the load on the air-conditioning system and, consequently, the cost.

#### 4. *Ratio of exterior glass area to wall area.*

Owing to the fact that the heat passes much more easily through glass than through the thicker and more resistant wall construction, a high proportion of glass to wall area means increased cost with the increased work which the conditioning system must do.

#### 5. *Ventilation requirements for air quality and smoke removal.*

The requirements for ventilation, determined in advance, will vary considerably with the number of occupants, type of business, unusual odor or fume conditions. A brokerage house will cost considerably more to operate than would another area less densely populated and with less smoking by the occupants.

#### 6. *Density of occupancy.*

Inasmuch as the average heat given off by a person at rest each hour is enough to raise a quart and a half of ice water to the boiling point, it follows that the denser the population, the greater the operating cost. While the density of occupation may generally be taken to be one hundred square feet per person, a ratio of one person to every sixty-five to seventy square feet is not unusual. It has been found possible, however, in air-conditioned spaces, to increase the population load as much as 20 per cent and still have comfortable and efficient working conditions. With such densities, the cost of operation will of course be greater than for areas more sparsely populated.

#### 7. *Heat given off by lights and office machines.*

Each one thousand watts of electric light give off about 3400 B. t. u.'s of heat per hour, enough to raise about twelve quarts of ice-cold water to the boiling point. Also, every one-horse-power motor in use in the area to be conditioned gives off about three-quarters that much heat. The presence of such factors adds to the cost due to increased heat to be removed.

#### 8. *Available cooling water.*

After the heat has been taken out of the room, it must be removed from the equipment—which is often done with water, either with or without refrigeration equipment. The character-

istics of the available water affect both the choice of equipment and the operation cost.

### 9. *Availability and costs of steam and electric service.*

Electric motors are usually used to drive the conditioning equipment and a variation in cost of available service will cause the operating costs to vary. In some cases, steam-driven equipment may prove feasible.

### **Fixed charges.**

The items under this heading should be based on the total cost of the system, including the cost of the equipment plus installation and including connections to service facilities, cost of preparing foundations, and other incidental building work.

#### 1. *Depreciation based on a pre-determined amortization of the total invested capital.*

This period may vary with particular conditions, such as permanency of occupancy, business judgment, or the size of the system, possibly from a few years up to a usual maximum of fifteen years.

#### 2. *Interest on the capital invested.*

Usually this is taken as an average over a period of amortization, the amount determined by the owner on his own conditions.

#### 3. *Insurance and taxes.*

This item depends upon local conditions.

#### 4. *Rental on the space occupied by the conditioning equipment.*

Although it is a relatively small item, the regular rental rate for space which the equipment occupies should be included in the annual cost. This might be thought to be worth from ten to fifty cents per square foot for otherwise unusable basement space, to many times that rate for more valuable rentable area.

### **Operating costs.**

#### 1. *Hours of operation.*

Annual hours of operation may vary owing to particular conditions of occupancy, hours of business, type of work, out-

side atmospheric conditions, addition of lighting facilities, business machines, and so forth. In some business houses, such as brokerage houses, the number of occupants may vary widely throughout the day. On certain days the employees may remain for a considerable time after the usual closing hour. Thus the daily hours of operation may vary considerably, due to use load. A protracted spell of severe heat conditions may make it necessary to operate refrigeration rather continuously for that period.

## 2. *Cooling-water cost.*

It is not possible to quote a universal cost of cooling water, as it varies widely in different localities. In some cities, water may be obtained at a cost of forty cents per 1000 cubic feet, while in other cities the unit cost may be as high as \$2.50. The temperature of the water also plays a part in the total cost, as a low-temperature water may accomplish the same work of heat removal with a lower quantity and consequent lower cost.

## 3. *Electricity cost.*

There is also a lack of a universal unit cost for electrical energy. If the electricity used for the air-conditioning equipment is a relatively small portion of the total used by the building, benefit may be gained by the lower rate found in the higher use brackets. The unit cost for the same quantities of electricity in different cities varies from as low as one cent per kilowatt-hour to over three cents. As electricity cost is a high proportion of the total air-conditioning cost, a variation in this service cost will be reflected in the latter.

## 4. *Repairs and renewals.*

This would include the total cost of maintenance work, which the regular operating crew could not handle, and for which outside organizations would have to be called in.

## 5. *Overhead.*

A portion of the supervisory and administration salaries should be assigned to the air conditioning operating costs.

## Specific costs of two installations.

From the foregoing, it is readily apparent that it is not possible to give a unit figure of either installation cost or operating

cost of an air-conditioning system which will be universally applicable, inasmuch as there are so many variables involved. The following figures, therefore, should not be considered as typical. They merely indicate costs in two specific cases. The two areas were located near together and, although the condition of exposure was slightly different, the operation was taken for the same year.

*A. Building of 100,600 square feet—approximately 500 employees, plus an average of 6000 customers per day:*

Cost, complete plant installed .....	\$125,000.00
Cost per square foot .....	1.18
Cost per cubic foot .....	.0967
Summer cooling operation:	
Cost, 163 days or 1495 hours .....	6,701.63
Cost per day .....	41.43
Cost per day per employee .....	.0735
Winter ventilation operation .....	3,321.89
Cost per day .....	14.29
Cost per day per employee .....	.029
Yearly operating cost .....	10,022.89
Cost per day .....	33.40
Cost per day per employee .....	.067
Annual fixed charges .....	16,250.00
Total owning and operating cost .....	26,272.89
Cost per square foot per year .....	.261
Cost per day .....	87.57
Cost per day per employee .....	1.75

*B. Area of 85,000 square feet—approximately 1000 employees:*

Cost of system .....	\$90,000.00
Cost per square foot .....	1.06
Summer cooling—110 days .....	5,373.06
Cost per day .....	48.85
Cost per day per employee .....	.048
Winter ventilation—190 days .....	4,642.35
Cost per day .....	25.47
Cost per day per employee .....	.025
Annual operation .....	10,015.41
Cost per day .....	33.60
Cost per day per employee .....	.033
Annual fixed charges .....	11,700.00
Total owning and operating cost .....	21,715.00
Cost per square foot per year .....	.255
Cost per day .....	72.38
Cost per day per employee .....	.072

**Floors and floor coverings.** The type of floor covering best suited to an office is not merely a matter of individual taste or wish. Other considerations, such as fatigue, the elimination of noise, the general appearance of the office, durability, original cost, and maintenance expense, are among the factors which must be considered. The usual kinds of floors and floor coverings used in offices are carpets and rugs, concrete (painted and unpainted), cork, linoleum, marble, mineral compositions, plastic materials (usually asphaltic base), rubber, and wood. At the present time there is a tendency toward the use of quarter-inch battle-ship linoleum and various rubber coverings. Bare concrete is seldom used, because in a number of cases it has been thought that colds, rheumatism, and even tuberculosis have been contracted by persons forced to sit at a desk all day with their feet resting on the concrete itself. Rugs and carpets are chiefly used in private offices, although in a number of larger office buildings they are also used in foyers and hallways.

**Communicating systems.** Communicating systems may be classified as: (1) those services and mechanical devices which aid in the handling of written communications, including devices for carrying, transmitting, and receiving messages; (2) those which are used for handling oral communications.

Pneumatic tube conveyors are used quite extensively in modern office buildings. Large elliptical pneumatic tubes are used for the distribution of mail, while 1¼ inch "baby tubes" may be used to transport small papers. Belt conveyors are often used to carry papers, while basket conveyors and dumb-waiters quickly carry more bulky material up and down through the floors of the building. In department stores, great dependence is placed upon pneumatic tube systems of various sorts, one of the most important being for the transmission of sales slips and cash to a central cashier's office, referred to as the tube room, and for the return of the change and stamped paid sales check to



the customer. The value of such tubes may be illustrated by the fact that in one well-known store in New York City it is estimated that several thousand dollars a year in added expense is necessarily incurred because of the failure of the original designers of the buildings to install or provide for tubes of this sort.

The Telautograph is also used rather extensively for transmitting written messages between offices, particularly in cases where the character and length of each message may be different or where the information is of a highly confidential character. At both the Grand Central and Pennsylvania stations in New York City, for example, Tel-

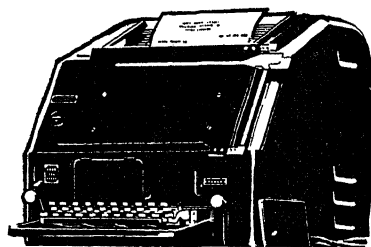


Fig. 6.—The Teletypewriter. *Courtesy of American Telephone & Telegraph Co.*

autograph equipment is used to notify the passenger information desk of the track number and time of arrival of each incoming train. Banks also use such equipment extensively. Under this system messages are written in longhand with

a special pen. The writing is then reproduced in exactly the same way, usually on a roll of paper, at the receiving station.

Many companies which have a number of branch offices located in different parts of the country use the teletypewriter service provided by the American Telephone and Telegraph Company through the associated companies of the Bell Telephone System. This system provides for the installation of machines, similar to typewriters, at each point, all being connected by wire with the headquarters. Sales orders, memoranda, or in fact anything that can be written on the ordinary typewriter can be transmitted between the home office and the branches. Under this plan order-handling time is sharply reduced. A single typing at any field office simultaneously produces all necessary car-

bons and master copies at headquarters. Because the operation is fully automatic, there is no need for checking or recopying the original documents.

Communicating systems of the second type—those which carry oral messages—are also widely used. The two most frequently found in offices are the telephone and the Dictograph.

The ordinary manual telephone is too well known to require comment. In the last few years many companies, especially the larger ones, have installed automatic telephone equipment which handles both inter-office and outside calls. Under this arrangement all instruments are provided with dials. While all extensions are, of course, connected with the company switchboard, calls between offices and local calls are made direct by dialing the proper number. Toll calls are made by dialing the operator. Automatic telephone systems such as this are obviously economical, because the services of an operator are not needed for inter-departmental and city calls, which comprise a large majority of those made. Such installations are usually housed in a separate locked room, under the full supervision of the telephone company, thus freeing the company of all responsibility for their maintenance.



Fig. 7.—The Dictograph. *Courtesy of Dictograph Products Company, Inc.*

The Dictograph is frequently used, particularly in large organizations where a supplementary inter-communicating

system which provides direct connection between a relatively small number of individuals, often officers and chief executives, is desired. The receiver and mouthpiece are similar in appearance to the hand telephone, sometimes called the French telephone. Connection is made by the person calling simply by depressing a small key, which is marked to indicate a particular individual.

There are many other communicating devices on the market. Since each office has its own specific problems, however, no useful purpose will be served by attempting to list and describe all those obtainable. It is, therefore, suggested that any office manager interested in securing further specific information concerning the details of such equipment inquire of the manufacturers themselves.

**Partitions and railings.** The tendency is away from private offices and the use of small single rooms in which only a few clerks can be placed. In many banks, for example, department heads are placed out with their departments, while officers whose work brings them constantly in touch with customers are almost always located on the "platform" in the open. Further consideration is given to the question of private offices in relation to office layout in the next chapter.

If it is imperative that all noise be shut out from a room, plaster partitions must be used, since wood and glass are not entirely soundproof. Even in this case, however, such rooms usually contain transoms for ventilating purposes. While rooms with plaster partitions are fairly soundproof, they have the marked disadvantage of shutting out light from the other parts of the office. In addition, they take up more room than either wood or glass and are expensive to take down and practically impossible to move from one place to another. Wood and glass partitions, on the other hand, are usually built in sections and may be moved from one location to another. The glass used in partitions may be either clear or obscure. In recent years many companies have adopted partitions made of steel and glass, simi-

lar in design and outward appearance to the wood and glass structure. While steel is more durable than wood, it is also more expensive, and, since wooden railings are usually used in offices, the combination of steel partitions and wooden railings may not be desirable. Steel railings and gates, however, may be purchased to go with the steel and glass partitions if one so desires.

Spindle railings rather than solid wood panels are now regarded as the best, since the latter give the impression of heaviness and more quickly show wear. Posts for railings should not be fastened to the walls or partitions, but to the floor only. If the floor is of concrete, a steel rod may be sunk into the concrete and extended upward.

**Noise-reducing facilities.** The problem of noise reduction and sound absorption is becoming more and more important, because of the increasing volume of exterior noises in large cities, and because of the extended introduction of office machinery. Noise is a contributing element to fatigue, and it is, therefore, important that it be minimized as far as possible. Four types of treatment for walls which will aid in reducing noise are felt, Acousti-Celotex, Akoustolith, and porous plaster. The felt method is the oldest. Cattle-hair felt, hair-and-asbestos felt, and a felt made from wood pulp are most often used. Under this method the ceiling surface receiving the treatment is first paneled with wood strips. The felt is then fastened between the wood grounds and covered with painted muslin, or perforated oil-cloth. It is customary to leave an air space between the felt and the cloth. Acousti-Celotex treatment is installed in tile form, the tile having sound-absorbing perforations. This is a semi-structural form of treatment and can be decorated with practically no change in efficiency. No cloth covering is required. Akoustolith is a tile fireproof material consisting mainly of pumice and cement. The two best-known porous plasters on the market are Sabinite and Guastavino plaster.

Acoustical treatments are to be found in a number of

large companies. A large department store in New York City, for example, uses both the felt with the cloth covering and the Acousti-Celotex. A well-known manufacturing company uses all three available acoustic materials—felt, plaster, and fiber board.

Despite the important effect which undue noise has on efficiency, the office manager in the ordinary situation is likely to have some difficulty in securing favorable action on the matter by chief executives, largely because of their ignorance of the matter. However, there are a number of steps, some of which are relatively inexpensive, which he can take to reduce noise. He can <sup>6</sup>:

1. Isolate noisy equipment and deaden its sound production.
2. Keep machinery in good mechanical condition, and well oiled.
3. Study the advisability of acoustical baffles in large ventilating ducts.
4. Place sound-absorbing materials close to sources of noise.
5. Study corridors for possible utilization of swinging doors to keep out noise, or of sound-absorbing materials to deaden it.
6. Study curved walls or ceilings for focusing and echoes, and hence for the desirability of changing the character of the reflecting surfaces or of applying sound-absorbing materials.

Manufacturers of sound-absorbing materials generally have literature available for distribution which describes in detail their respective products. All companies of course have experienced acoustical engineers on their staffs whose services are available to office managers. It is generally wise to confer with these engineers concerning specific problems, for the question of treatment of noise is quite a technical matter.

**Electrical facilities.** In constructing a new office building, in remodeling an old building for future use, or even in renting space in a building already constructed, it is most important that attention be given, while the template layout is being made and before the office is occupied, to the matter of electrical facilities. When possible, provision

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<sup>6</sup> Bengé, Eugene, *op. cit.*

should be made for a system of cross-sectioning trenches or ducts laid under the floor to hold wires for lights, power machines, telephones, communicating systems, and the like. Sockets in the baseboards should be located at every place where it is known or likely that electrical appliances will be used. Baseboards should be made removable, in order that wiring may be got at easily. If the building does not furnish removable baseboards, it will sometimes pay the tenants, especially in the case of a large company, to assume this expense themselves. The importance of the whole electrical-facility problem may be emphasized by pointing out the difficulties and discouragements which one is bound to have if a proposed new layout or rearrangement of departments or equipment is found to be impracticable or unduly expensive merely because the necessary electrical facilities are not available.

**Other physical factors.** In addition to those already mentioned, there are several other physical factors which must be considered in connection with office construction and layout. Among them are:

*Buzzer systems.* The number of call buttons, buzzers, and annunciation drop boxes should be kept to a minimum. Buzzer-call layouts are expensive to install originally, and expensive to move later on.

*Drinking water.* Unit drinking water coolers of the electric refrigerator or ice-cooler type are preferable to a central system piped to several locations. This is particularly true in periods of retrenchment where certain floors are vacated entirely and therefore the use of many outlets is lost.

*Clocks.* If wall clocks are necessary, individual electric clocks are preferable, from the standpoint of flexibility, to a central timing system. The original cost of central timing systems is relatively high, and changes are rather expensive.

*Cashiers' cages, counters, and so on.* Portable equipment, such as counter-height steel units and standard steel

or wood and glass front partitions with wicket windows, present a good appearance, are inexpensive, and are easy to move, if necessary.

*Shelving.* Except in isolated instances where permanency can be guaranteed, the use of wooden shelving for supplies, counters, and so forth should be avoided. Standard steel shelving costs little more and can be moved easily.

*Office maintenance.* Where space is rented, the tenant, as has already been said, is not expected to do any current maintenance work. Where the building is owned or completely occupied by a company, however, maintenance becomes a problem of considerable importance. Since the building superintendent, who is in direct charge of building maintenance, often reports to the office manager, it is important that the latter have some knowledge of office-building maintenance matters.

The first step is to work out a plan of building inspection and maintenance that will adequately cover the various parts of the building and types of equipment which must be serviced, but which at the same time will keep maintenance costs within a reasonable limit. For example, it is obvious that the maintenance of clean lighting fixtures, ceilings, and windows is of very considerable importance and has a direct relation to office efficiency. For this reason a regular schedule of cleaning should be worked out, so that lighting fixtures are cleaned at least every two weeks and windows at least once a month, preferably twice a month. Similarly, the care and cleaning of lavatories and wash rooms is a matter which merits constant attention. Elevator maintenance is an obvious necessity, the importance of which cannot be too greatly stressed. The maintenance plan should provide for the periodic treatment of furniture in order to keep the wood surfaces in proper condition.

Floors, of course, should be swept every night. Sweeping, however, does not remove all the dirt, and, consequently, provision must be made for occasional washing or

scrubbing. The office manager or building superintendent, however, should be sure that the scrubbing accomplishes something more than a more equal distribution of the dirt. At the Phoenix Mutual Life Insurance Company, for example, scrubbing machines are used. In this company the linoleum floors are scrubbed once a year with a soft cleaning powder and then mopped with a clean water after the scum from the scrubbing machine has been sucked from the floor by a special machine. After the floors are thoroughly dry, a liquid wax is applied, which is accomplished by using soft brushes on the same machine that was used for scrubbing. Once the floors are treated, no water is used on these floors until it is necessary to scrub them again, which is usually a year or more later. This system of treating floors is reported to have proved to be a practical time and money saver to the company.

**Building maintenance system of the Retail Credit Company.** The building maintenance system used by the Retail Credit Company illustrates a simple yet practical plan for putting this work on a systematic basis.<sup>7</sup>

The first part of the system is based on the use of a visible-card system. Each cleaning and maintenance operation, other than those handled each day, is covered by a card. The cards are filed in visible wall panels located near the desk of the building superintendent. The card gives a description of the work, and blank spaces are provided to show the date of completion of the job, the initials of the person doing the work, time required, and so on. Each day, the building superintendent takes this information from the daily work sheets of each building-service employee and enters it on the cards. One set of panels carries cards for each day of the week, and another set for each month in the year. As monthly cards come up for handling they are transferred to the proper places in the weekly panel, according to the time best suited for performance of the particular duty. Colored celluloid sliding signals are placed at the right-hand side of each card, and as that job is completed the signal is

<sup>7</sup> Brooke, G. B., "Problems of Fixed Equipment," *Annual Proceedings*, pp. 20-21. National Office Management Association, 1933.



changed to the opposite side, so that anyone can see at a glance exactly the status of all work schedules.

The advantages, over a former plan of merely keeping a large group of tickler cards, are that this system:

1. Shows the status of the work at all times.
2. Allows work to be planned in advance.
3. Maintains cleaning and maintenance schedules.
4. Prevents lost or misplaced ticklers.
5. Shows date each job is handled.
6. Shows time required for each assignment.

The second part of this system has to do with thoroughly checking the cleaning and the condition of the building itself. Checking is divided into two parts. The first has to do with cleaning. Mimeographed forms cover inspection of the cleaning of the building and consist of a detailed check-list of all the things to be inspected. The superintendent is required to check off each item, and there is room on the form for comment on any points which occur to him for handling with his men, or which suggest a change in system. The checking forms are divided into six parts, one part being handled each day, thus giving a complete check of the entire building once a week. By covering a separate section each day a much more thorough inspection is secured than if an attempt were made to check the entire building at one time.

The other inspection has to do with the condition of the permanent building elements. There is also a set of forms for this purpose similar to the cleaning check forms. The building superintendent inspects one part of the building every other day, which results in the entire building being covered once a month. By having the lists actually checked off as the inspection is made, a practical method is provided for securing a really complete inspection.

## CHAPTER V

### *Making the Office Layout*

**The importance of layout.** In practice, location, physical factors, and layout must be considered together. For our purposes, however, it has been necessary to deal with each separately. Location and physical factors have been discussed in the two preceding chapters. We are ready now to consider the matter of layout itself.

Ever since Mr. Taylor pointed out the importance of the proper layout of factory departments, industrial executives have given a great deal of attention to the place which each working section occupies in the plant. So important has this matter become that no experienced factory executive would consider the erection of a plant without giving very serious study to departmental layout.

Most businessmen now recognize that careful attention should also be given to office layout. Until fairly recently, however, this was by no means always the case. Departments were all too often placed with little or no regard for their relation one to the other, to the nature of the work of each department, or to the impression which the office made on the visitor. To appreciate the dollar-and-cents value of conserving office space, it is only necessary to point out that at four dollars per square foot per year on a five-year lease, to save a square foot of space in fifty different places, on such things as aisles, hallways, private offices, and so on, represents a net economy of \$1,000.

**Factors involved in office layout.** The fundamental principles of an efficient and practical office layout can be easily and simply stated. The work should move in as

straight a line or as continuously in one direction as possible, and the number of people employed on each operation should be properly adjusted to the amount of work to be done. It is obvious, for example, that, if operation C takes twice as long as operation B, assuming that the work goes from B to C directly, there should be twice as many employees in section C as in section B. If this adjustment is not made, constant congestion of work at operation C will inevitably result.

In practice, however, these ideals can rarely, if ever, be attained. The layout and construction of a well-planned mail-order house, however, is an excellent example of a case in which careful forethought and planning have made it possible to reach the ideal to a very considerable extent. In one such company, incoming bags of mail are opened on the top floor. From this point the various orders and records progress downward from floor to floor, through the merchandise stock rooms and other departments, to the street floor, where the completed order is assembled and made ready for shipment. While, of course, it is not always possible to secure as direct a flow of work as this, the office manager should keep the principle which this arrangement illustrates in mind when considering layout problems.

**Existing departmental divisions.** The main and the departmental divisions of a business constitute the basic structure upon which the layout of the departments should be planned. Related departments should be placed adjacent or close to each other. In a department store, for example, merchandising, publicity, control, and store operation constitute the four basic divisions of the business. The control function, however, may be further subdivided into general accounting, expense control, accounts payable, credits and collections, inventory, statistics, and general office management. The credit and collection department, for example, has need frequently to consult the bookkeeping or accounting department for information regarding the

volume of purchases and payments of various customers. These two departments should, therefore, be placed near one another. On the other hand, if a centralized filing department or stenographic department is contemplated which will serve the executives of all departments, it should be placed in as central a location as possible.

**Building around major departments.** Consideration of major departments and their relation to office layout develops in turn another principle of office layout which is of very practical importance. This is the fact that, in planning for future expansion, one should provide for growth in major departments, rather than in minor ones. For example, the existence of a sizable bookkeeping department should not be considered the sole reason for anticipating still larger requirements for that section alone in the future. Rather, one should consider the financial division in its entirety, and thus think of the bookkeeping department, not as a unit in itself, but as a unit in relation to the size and work of the other sections of the entire financial division and in relation to the probable growth of the company as a whole.

**Flow of work.** Closely related to the question of departmental divisions is that of the existing or proposed flow of work through the office. In every business one will find a certain series of operations around which all other activities in the office more or less revolve. For example, in a mail-order house the customer's order is the unit of consideration, and the major operations, therefore, have to do with the steps which are taken in dispatching the order. In an insurance company the receipt and transmission of an insurance application and policy form the dominating routine. While subsidiary or minor operations or paths of work which intersect the major one may exist, they should be regarded as activities of minor importance, in contrast to the major activities.

**Analysis of the work to be done.** From the discussion in the foregoing sections it is apparent that in order to

plan an office layout properly one must consider not only the departmental divisions and the sequence of the major operations, but the number of employees and the volume of work. To analyze this situation fully and to ascertain for each employee and each working unit the kind and amount of work turned out, both regularly and periodically, is a very considerable undertaking. In fact, it is a task which, because of its very complexity, has been too largely neglected in the average office.

The fact that it is difficult, however, does not mean that it should not be attempted, nor that, once done, the benefits accruing will not be correspondingly great. Reference was made in Chapter II to the auditing of departmental procedures and methods, which an increasingly large number of companies are doing. This sort of work clearly exemplifies what is involved in making an analysis of work performed. In a subsequent section of this chapter, and in a number of other chapters, specific key questions are given which will be found useful in such work.

**Private offices.** The number of private offices to be provided, and their location, is a matter of obvious practical importance in making an office layout. The private-office question is a debatable one and, unfortunately, it sometimes becomes quite a sore point among company executives. There are many circumstances under which private offices are necessary, or at least extremely desirable. The work of the purchasing agent in a manufacturing concern, who is engaged in interviewing salesmen a good part of each day, is a case in point. The work of the copy writer or of the artist in an advertising agency is another example. The nature of the interviews which most corporation officials have with outsiders, as well as of the innumerable informal conferences with employees and subordinates, practically makes it necessary that such persons have private offices.

On the other hand, as stated in the preceding chapter, the tendency is away from the private office. More and more

## MAKING THE OFFICE LAYOUT

one will find department heads being placed out in the room with their subordinates, separated from them perhaps only by a railing. The old arrangement, whereby everybody who had someone else working for him assumed that he was entitled to a private office, is largely disappearing, and in its place is coming an arrangement whereby even high officials may be separated from others only by a railing, if indeed that. Banking institutions have led the way in adopting open layouts, and an increasing number of industrial and commercial organizations are following suit.

Obviously no general rule can be given which the office manager can use to determine which executives of his organization should have private offices. The most that can be said is that important business executives are gradually growing less insistent about their "right" to a private office.

**Impression given by the office.** While it is true that one should not decorate a place of business solely for show purposes, it is also a well-established fact that the impression which an office makes, both on the casual visitor or customer and on the regular employee, often has a direct effect on their opinion of the company. An arrangement, for example, which suggests at once efficient and business-like methods cannot fail to create a better impression than one in which confusion, noise, disarrangement, and untidiness prevail.

**Securing flexibility.** The necessity for a business to adapt itself to changes and varying needs makes it imperative that proper provisions be made for flexibility in office arrangement. "Office layout would be a simple matter," said the office manager of a company which had just moved into a building of its own, "if the organization would only stay put. We have planned for expansion, of course, but if there is one thing that the experience of the past seven years has taught me, it is not a definite, permanent, scheme of layout, but the fact that flexibility is the soul of growth and progress." This executive then proceeded

to explain that the adoption of a plan of interchangeable unit partitions solved the problem of layout for his company, the matter of space for future expansion having already been taken care of in the erection of a recently constructed building. One authority states that on the average the space requirements of an office organization double every ten years, while another sets a minimum five years as the period in the future for which requirements should be anticipated in selecting a location and planning the layout.

**Practice and recommended standards in office layout.** While it is not possible to lay down a set of rules covering standards in office layout which will hold true under all circumstances, the practices of a number of representative companies in various lines of business are indicative of what is actually being done. A comprehensive survey of this subject was made by *Management Methods*, in co-operation with the National Office Management Association, in 1932. The following tables summarize the results. In each case recommended standards are given, as well as high, low, and average figures.<sup>1</sup>

TABLE I. GROSS SPACE PER PERSON  
(Includes space for executives)

Lines of Business	Average Square Feet	High	Low	Recommended Standard
Manufacturing .....	106	402	36	60
Wholesale .....	77	163	67	75
Life insurance .....	177	416	84	75
Fire insurance .....	104	111	103	75
Banks .....	120	281	89	80
Financial .....	97	136	67	75
Railroads, utilities ....	99	153	72	70
Merchandising .....	110	118	101	65
General average ....	127	416	36	

<sup>1</sup> "Yardsticks of Business Practice" (pamphlet), *Management Methods*. McGraw-Hill Publishing Company, Inc., New York.

TABLE II. SPACE PER CLERK  
(Includes space for files, corridors, etc.)

Lines of Business	Average Square Feet per Clerk	High	Low	Recommended Standard
Manufacturing .....	93	248	31	50
Wholesale .....	70	119	40	50
Life insurance .....	176	242	83	60
Fire insurance .....	102	103	90	60
Banks .....	117	328	83	60
Financial .....	79	122	50	50
Railroads, utilities .....	94	150	50	60
Merchandising .....	99	109	65	50
General average .....	112	328	31	

TABLE III. SIZES OF PRIVATE OFFICES  
(Space per executive in private office)

Lines of Business	Average per Person	High	Low	Recommended Standard
Manufacturing .....	216	1000	50	120
Wholesale .....	157	303	125	120
Life insurance .....	273	833	150	120
Fire insurance .....	159	360	120	120
Banks .....	344	391	120	120
Financial .....	224	238	191	120
Railroads, utilities .....	267	294	137	120
Merchandising .....	225	231	150	120
Average .....	256			

TABLE IV. SPACE OCCUPIED BY EXECUTIVES,  
DEPARTMENT HEADS, ETC.  
(Not in private offices)

Lines of Business	Average per Person	High	Low	Recommended Standard
Manufacturing .....	101	432	50	100
Wholesale .....	73	400	38	100
Life insurance .....	96	200	40	100
Fire insurance .....	99	100	90	100
Banks .....	109	150	55	100
Financial .....	44	48	41	100
Railroads, utilities .....	104	600	45	100
Merchandising .....	153	200	118	100
Average .....	105	600	38	



TABLE V. FILING SPACE: PER CENT  
OF TOTAL OFFICE SPACE

Lines of Business	Average	High	Low
Manufacturing ....	.066	.306	.016
Wholesale .....	.116	.268	.027
Life insurance ...	.115	.250	.025
Fire insurance ...	.170	.290	.050
Banks .....	.055	.115	.008
Financial .....	.029	.033	.026
Railroads, utilities	.075	.136	.051
Merchandising ....	.127	.392	.031
Average .....		39%	

TABLE VI. ENTRANCES, CORRIDORS, RECEPTION ROOMS:  
PER CENT OF TOTAL OFFICE SPACE

Lines of Business	Average	High	Low
Manufacturing .....	.280	.133	.003
Wholesale .....	.150	.069	.025
Life insurance .....	.290	.135	.021
Fire insurance .....	.102	.102	.100
Banks .....	.429	.243	.084
Financial .....	.359	.233	.107
Railroads, utilities	.319	.170	.079
Merchandising .....	.286	.146	.197
Average .....		43%	0%

TABLE VII. PERCENTAGE OF EXECUTIVES IN PRIVATE  
OFFICES AND NOT IN PRIVATE OFFICES

Lines of Business	% in Private Offices			% not in Private Offices		
	Average	High	Low	Average	High	Low
Manufacturing ....	56	100	0	44	100	0
Wholesale .....	38	78	0	62	100	22
Life insurance ....	62	100	0	38	76	0
Fire insurance ....	58	63	53	42	47	0
Banks .....	21	42	0	79	100	58
Financial .....	51	64	37	49	63	36
Railroads, utilities	49	100	0	51	100	0
Merchandising ...	42	67	13	58	87	33
Average .....	52	100	0	48	100	0

TABLE VIII. SPACE AVERAGES: BY NUMBERS OF EMPLOYEES IN COMPANIES

	Less than 50 Clerks	50-100 Clerks	100-500 Clerks	Over 500 Clerks
Gross square feet per person....	136	130	133	101
Net square feet per clerk .....	136	99	118	98
Size of private offices—in sq. ft...	231	165	233	232
Space occupied by executives not in private offices .....	100	65	81	71
Corridors, reception rooms, en- trances—% of total space ....	16%	11%	13%	16%
Filing space—% of total space ..	7%	7%	8%	11%
Storage space—% of total space	8%	6%	8%	5%
% of executives in private offices	50%	52%	57%	51%
% of executives not in private offices .....	50%	48%	43%	49%

The survey indicated that those who recommend from 75 to 100 square feet gross per person err on the side of conservatism, for the average is 127 square feet. While averages in such matters mean little, they are at least an indication of tendency. The highest figure per person, gross, was 416 square feet. By lines of business (Table I) the survey showed that life insurance companies had the highest average figures and wholesale companies the lowest. The high gross figure above mentioned (416 square feet) was in a life insurance company while the lowest figure (36 square feet) was in a manufacturing company. Recommended standards are from 60 to 80 square feet (gross) per person, depending upon the line of business. Table II contains a summary of net square feet per clerical office worker. To obtain this figure the amount of space occupied by private offices, reception rooms, and corridors, was deducted, and where filing space exceeded 15 per cent, the amount by which it exceeded that percentage was also deducted, leaving a figure indicating the space actually occupied by clerks. This average was only slightly less than the average gross space: 127 in the former, and 113 in the latter. Thus it would appear that the number of clerks is the predominating factor. Recommended standards were 50 to 60 square feet net per person. In a large number of cases these standards were found to be perfectly reasonable and workable, thus indicating the very considerable waste revealed by the survey.

The general average for private offices in all lines of industry (Table III) was 256 square feet, which indicates an average

room of nearly 10 by 26 feet. In one life insurance company the average size of the private office was over 800 square feet. The recommended standard for a private office is 10 by 12 feet or 120 square feet—less than half the size of the average office reporting in the survey. Such an office would have about 36 square feet devoted to desk and chair, and the remaining 84 square feet would be available for book cases, guest chairs, and other appurtenances.

The space occupied by executives not in private offices—that is, in the open office—was considerably smaller, the average being 105 square feet, as compared with a recommended standard of 100 (Table IV). The highest figure was in a manufacturing company, with 432 square feet, and the lowest in a wholesale company—the one previously alluded to—which had 38 square feet, meaning in the latter case that each executive occupied only about the same space as the ordinary office worker. This is not a recommended practice, however, not only because of its effect upon the executive but also upon the office workers for the reason that the work of the latter must be constantly interrupted by the conferences which inevitably take place at the executive's desk.

The survey also threw some light on the question of how far the modern idea of the open office—which was discussed in a previous section—has taken hold. While only a small percentage of the companies reported that they had no private offices, a large number of them had only a few (Table VII). On the average, 52 per cent of the executives in reporting companies were in private offices and 48 per cent in an open office. Companies reporting no private offices were in the manufacturing, wholesaling, and banking lines, while life insurance companies, railroads and utilities had the largest percentage of private offices.

Filing space (Table V) occupied, on the average, about 9 per cent of the total space. By the very nature of their papers, the files of a life insurance company should be larger, but the average of insurance companies reporting showed only 11.5 per cent though there were examples running as high as 25 per cent. Banks and manufacturers had the lowest percentage—5.5 per cent and 6.6 per cent, respectively. Undoubtedly there is, in general, too much space given over to the filing of papers. Among other things, the length of time they are kept after they are no longer of value is one cause for the high percentage of space devoted to this purpose.

The average amount of space occupied by entrances, cor-

ridors, and reception rooms was approximately 17 per cent of the total space (Table VI).

While it would seem that the size of the office should have some effect upon the economy of space, this survey did not show it (Table VIII). The offices reporting were divided into four classes: (1) those with less than 50 clerks; (2) from 50 to 100; (3) from 100 to 500; (4) above 500. The net number of square feet per person was 136 in Class 1; 99 in Class 2; 133 in Class 3, and 101 in Class 4, showing that economy apparently does not begin until the office has over 500 clerks.

**Determining space requirements.** In the practical work of determining space requirements, the space required for each division or each department should be used as a basis, rather than an arbitrary average per employee. In the following discussion<sup>2</sup> gross office space is defined as the area embraced within the inside perimeter of the enclosing walls. Net office space is the gross floor space minus the area required for structural and service elements—columns, radiators, elevators, building wells, janitors' closets, toilet rooms, cloak and locker rooms, lobbies, entrances, stairways, and so on. Hence net office space comprises the area available for desks, chairs, equipment, and aisles.

The determination of the total net space required can readily be estimated by using the following procedure:

1. Grade the space requirements of each present employee according to the following classification:

- A. Private office for executive.
- B. Private office for department head or technician.
- C. Space for department head or technician.
- D. Space for division head, chief clerk, etc.; or employee, requiring both desk and table.
- E. Space for stenographic secretary; employee with 60 by 34 inch desk with chair and small accessory equipment, such as transcribing machine, extra chair, etc.
- F. Space for usual clerical desk (60 by 34 inches or 50 by 34 inches), and chair. The 50 by 34 inch desk is adequate for most clerical work.

<sup>2</sup> Bengé, Eugene, *Cutting Clerical Costs*. McGraw-Hill Book Company, Inc., New York, 1931.

- G. Space for small clerical desk (42 by 34 inches or 32 by 38 inches) and chair; also for half of double desk with chair.
- H. Special—as telephone operators, photostat operators, mail clerks, draftsmen, etc. Measure actual space used and estimate space required.

2. Total the number of employees in each grade.

3. Allow space for each grade according to the following scale:

<i>Grade</i>	<i>Square Feet</i>
A ..	... 300
B ..	... 250
C ..	... 150
D ..	... 75
E ..	... 50
F ..	... 45
G ..	... 40
H ..	

4. Summarize space requirements as follows:

Grade	Allowance, Square Feet	Number of Employees	Space Required, Square Feet
A .....	300	4	1,200
B .....	250	7	1,750
C .....	150	8	1,200
D .....	75	23	1,725
E .....	50	20	1,000
F .....	45	354	15,930
G .....	40	82	3,280
H .....	..	14	1,360*
Total .....		512	27,445

\* Based on actual measurement.

The figures of 512 employees and 27,445 square feet will be carried forward through the succeeding steps in the illustration of how to compute the net office space required.

5. Measure the space needed for fixed and movable equipment not assigned to the space requirements of any one employee. Determine space needed for reception rooms, conference rooms, etc. Add these figures to the previously obtained total space required.

6. Basing the estimate mainly upon the ratio of growth of office personnel in the past, forecast the probable number of employees at the end of the period for which occupancy of new

quarters is contemplated. If the business is highly seasonal as, for example, in a department store, be sure to allow for the office requirements at the peak of the busy season. For purposes of illustration, let us assume that this figure is estimated as a maximum of 700 employees at the end of ten more years.

7. Increase the accumulated total of space required in the proportion which the estimated increase in the number of employees is of the present number of employees, as in the following example:

Step 4	Space needed for 512 employees .....	27,445 square feet
Step 5	Space for equipment, conference rooms, etc...	14,255 square feet
	Space for present demands .....	41,700 square feet
Step 6	Increase of personnel ..... 188 employees	
Step 7	Space added for growth (188/512 of 41,700) ..	15,311 square feet
	Total net office space required .....	57,011 square feet

If the management of a company which required this space had used the rule of thumb previously mentioned and had allowed 100 square feet per employee, it would have severely overestimated its space requirement. Knowing the amount of net space needed, it is in a position to seek, or to construct, quarters which will provide the net space needed for a decade to come.

**Making the layout itself.** The first step in making the office layout itself is to secure the working tools. These include a drawing board or table, a lettering pen, a ruling pen, a straight edge, a cork board for mounting floor plans, cardboard for cutting out templates of furniture and equipment, and glass-headed tacks for fastening the templates to the layout chart. Figure 8 shows templates, drawn to a quarter-inch scale, such as are used for the more usual kinds of office furniture. Similar templates should be prepared for all equipment, machinery, and appliances that will take up floor space in the proposed layout.

The first actual step is to prepare a rough sketch of the present layout, with each piece of equipment and furniture indicated on it. Following this, the main paths which the work follows under the present arrangement should be drawn into the plan.

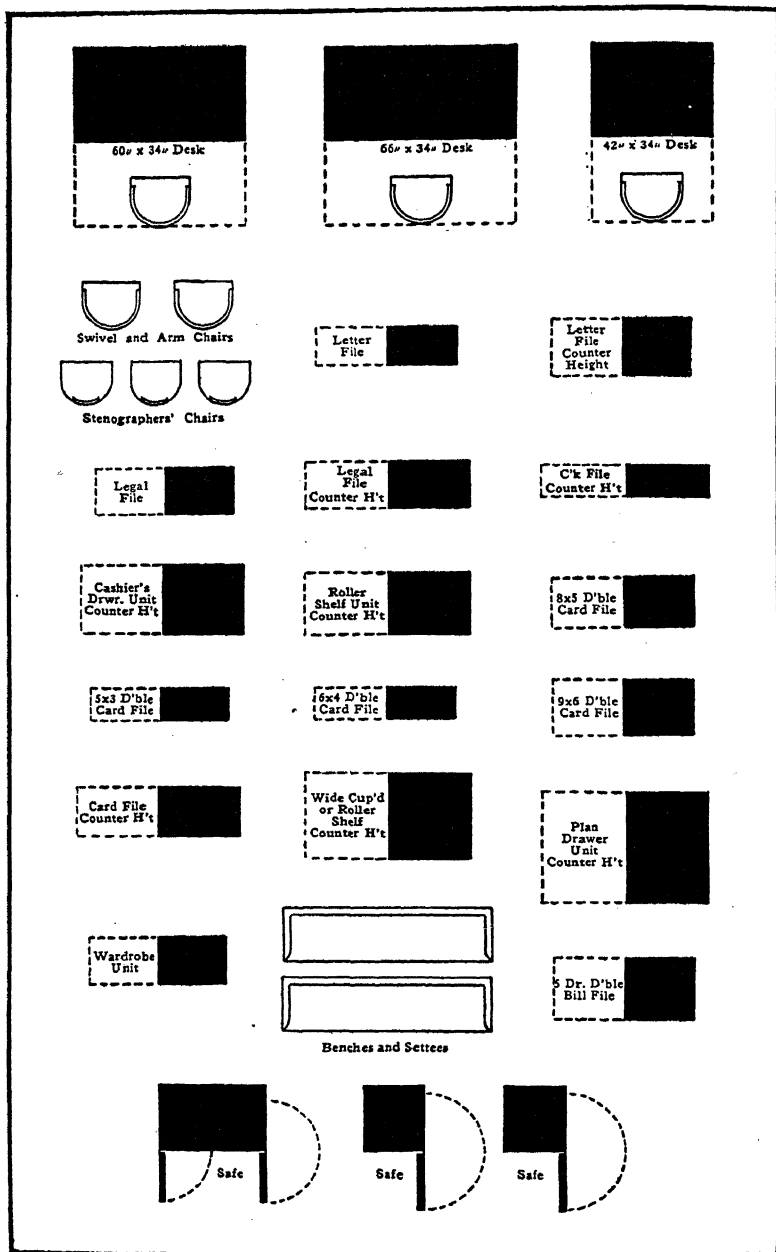


Fig. 8.—Templates. *Courtesy of Art Metal Construction Company.*

The second step is to consider such rearrangements of departments, of work, or of employees as are planned for the new space. At this point it may be desirable to make a detailed study of the nature of the work of each individual. If this is done, revisions will doubtless have to be made in the sequence of operations as they will be performed in the new layout, or under the new system.

The third step is to determine what of the old furniture will be discarded, what will be moved to the new location, and what new furniture must be secured. Lists or requisitions are then prepared for the guidance of the purchasing department in placing orders for new equipment needed. Similar lists of mechanical office appliances must also be prepared at this time.

When it has been ascertained what people are to occupy the various departments and what relation, from the standpoint of the type of work, each department will bear to the other, a rough layout is prepared, showing the various spaces in the new building which the departments will occupy, and the approximate place to be occupied by each employee.

The rough layout chart should then be checked by the office manager and the various department heads jointly, and any necessary rearrangements made. Before preparing the final draft, the office manager should be sure that all questionable matters of arrangement have been fully and definitely decided upon by all concerned.

When the best possible arrangement of individuals and departments has been worked out, the fourth and final step is to prepare the finished layout chart. In this connection the use of a scale of one-quarter of an inch to a foot will be found most practical. Templates should be cut out of cardboard to indicate the various pieces of equipment, and numbered, colored, or otherwise identified so that there will be no difficulty in ascertaining quickly the kind of equipment or appliance referred to. In making the final layout it will be much less work if one department



is planned at a time and the final approval of the arrangement secured from each department head in turn.

The completed and final template layout should then be photostated or otherwise reproduced so that a sufficient number of copies will be available for use where necessary. The original cork board with templates attached, however, from which the photograph was made, should be retained for possible future reference and use.

A procedure of the kind just described, while it takes time and requires considerable effort, will be fully justified by the decreased confusion, decreased loss of time on the part of the executives and clerks, decreased moving expenses, and general increased ability to move from the old to the new office with the smallest practical amount of delay and inconvenience.

Some layout pitfalls. There are certain pitfalls which should be guarded against in office layout work. These may be summarized as follows<sup>3</sup>:

1. Re-creating old space relationships in new quarters.
2. Assigning too many private offices.
3. Providing too many partitions, particularly plaster partitions.
4. Usurping space for private offices, conference rooms, etc., which would have greater utility if otherwise employed.
5. Assigning fixed areas, like floors or wings, to departments when space studies show that less space is required.
6. Building large storage vaults for records which should be stored elsewhere or destroyed.
7. Allowing the whims of executives to overrule flow of work to the detriment of departmental positioning.

Specific examples of good and poor office layouts. While the companies referred to must remain anonymous, the following illustrations<sup>4</sup> not only show concretely how actual office layouts look after they are completed, but also indicate specifically how poor layouts can be improved

<sup>3</sup> Bengé, Eugene, *op. cit.*

<sup>4</sup> "Space Management in the Office," *The Office Economist*, March, 1932.

by changes in the placement of equipment in relation to the flow of work, even though the total space used is the same size and shape.

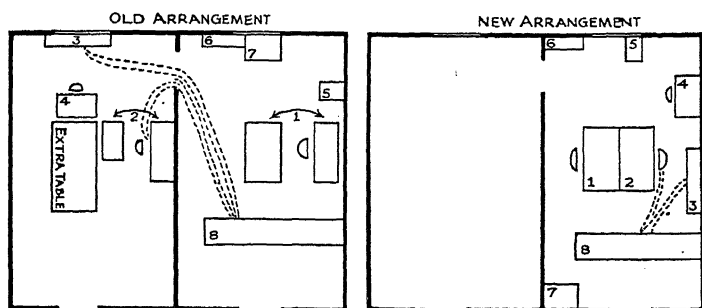


Fig. 9.—Space Requirements Cut in Half. (1) Roll-top desk and table replaced by large flat-top desk. (2) Roll-top desk and typewriter replaced by combination desk. (3) File containing documents often referred to, moved to more convenient location. (4) Typewriter table used by part-time typist. (5) Letter file, same relative position. (6) Bookcase, practically same location. (7) Safe. (8) Counter.

The first diagram (Figure 9) illustrates a case where space requirements were cut in half. This change was necessary in order to provide an office for a minor executive who had been added to the staff of the manager who occupied the adjoining suite.

The primary reason for this change was to save space, but the new arrangement facilitates the handling of routine matters. The work of the chief clerk and the deputy clerk are very closely associated; under the new arrangement dictation can be given and matters discussed without the necessity of either leaving their desks. The old arrangement made necessary a good deal of movement to and fro between the two desks.

The chief clerk is obliged to be absent from the office frequently, often for several hours at a time. Under the old arrangement the main office was deserted much of that time. Under the new arrangement, the deputy sees everyone who enters the office at once, and is often able to answer their inquiries without moving from his desk. In the event that she must go to the counter, or obtain papers from the file, it is with the minimum rather than the maximum expenditure of time and energy. When the old arrangement was in effect an index

clerk was employed; this work is now handled by the deputy with the assistance of a part-time typist.

There was no cost whatever attached to this rearrangement, as at the time the change was made the new general manager had a survey made of the equipment in the entire building so that the furniture as well as space might be used to the best advantage. The large flat-top desk, and combination typewriter

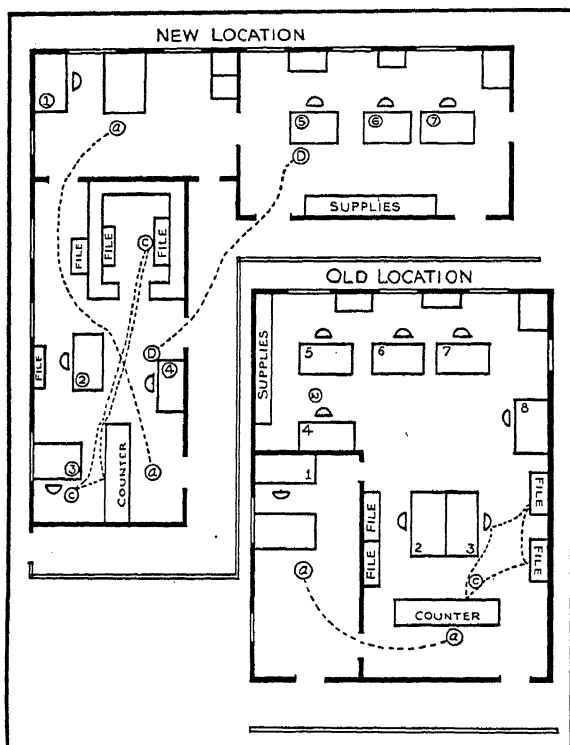


Fig. 10.—More Space Did Not Improve Layout. *Old Arrangement.* Routes a-a: Callers may reach head of department (1) without going behind counter. Routes b-b: Secretary (2) near head of department, also close to counter and important files. Routes c-c: Record clerk (3) close to counter and records often referred to. Routes d-d: Work of desks (4) and (5) very closely associated. Routes e-e: Desks (6), (7), and (8) form independent unit.

*New Arrangement.* Routes a-a: Callers must pass directly through the office. Routes b-b: Not so conveniently located. Routes c-c: Records kept in vault. Numerous trips between counter and vault necessary. Routes d-d: This unit completely disrupted. Routes e-e: Desk (8) located in adjoining room.

desk, which were necessary in order to make the saving in space possible, were released from service in other departments and were replaced by more suitable equipment, and the furniture which was no longer suitable for the office shown in the diagram was used to advantage elsewhere in the building.

Figure 10 shows the problem of a department which was allotted space, greater in floor area by a considerable number of square feet than that which it occupied in the old location, but which presented certain difficulties.

These offices are located in a recently completed annex to the main building of a comparatively small corporation. Space in the contemplated structure was allotted merely on a square foot basis. After building operations were commenced, however, it was discovered that several important factors had been overlooked. Then department heads were instructed to make diagrams of the space allotted to them and plan their office arrangements. It was found that counters could not be properly located; that logical operating units would have to be broken up; that the vault was not well placed, and so forth. Many of the difficulties encountered could easily have been remedied when the building was in the planning stage, but changes made later meant costly "extras." The annex, which was supposed to provide space for the normal growth of departments over a period of ten years, proved to be quite inadequate upon completion, due in large measure to the fact that the space was not well designed.

Figures 11 and 12 illustrate a case where the space allotted to the department was such that it could be used to advantage, but hasty and piecemeal changes resulted in a condition which was decidedly detrimental.

The objective in this case was not to save space, as the total amount of space allotted to the department was in keeping with its requirements, but to use the space available to better advantage. Practically all of the business of the office is carried on by means of telegrams and telegraphic reports, which are transmitted to and from the telegraph office, located in the same building, by means of the pneumatic tube. Telegrams are received and sent almost continuously during the entire day. As indicated in Figure 11 the chief difficulty with the old arrangement is that the office of the assistant superintendent is improperly located. It was decided, more or less hurriedly, to enclose the space, and no consideration was given to the effect of this on the functioning of the department as a whole. However, he had occupied the offices but a very short time when he realized

that a mistake had been made—or rather, that something must be done to relieve him of the annoyance of having persons constantly passing in front of his desk. While the logical solution

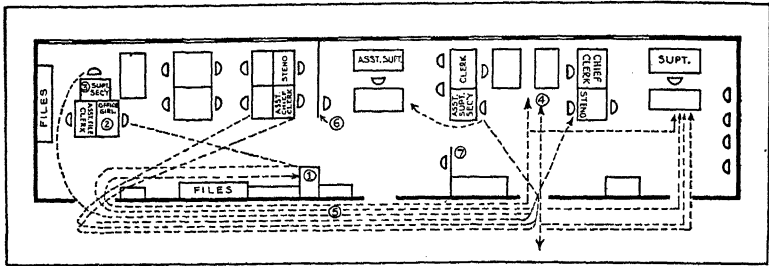


Fig. 11.—Old Arrangement. (1) Pneumatic tube (which is center of activity in this office). (2) Office girl who attends the tube, seated some distance from it, and with her back towards it. (3) Superintendent's secretary seated at maximum distance from desk of his chief (secretary also has charge of files). (4) Chief clerk often interrupted by persons asking to be directed to other offices, etc. (5) Dotted lines show route over which messages must travel to and fro from the tube and which clerks must take in handling routine business. (6) Personnel of department take circuitous route because constant passing to and fro in front of desk of assistant superintendent annoyed him.

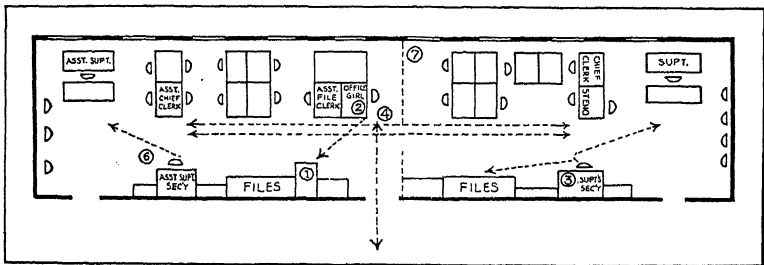


Fig. 12.—Same Space Rearranged. (1) Pneumatic tube, necessarily in same location, but relatively in more central position. (2) Office girl seated near the tube and facing it which reminds her to attend to it promptly and regularly. (3) Superintendent's secretary seated at a minimum distance from office of superintendent, and in same relative position to files (assistant file clerk also near files). (4) All inquiries addressed to office girl, who can direct persons to proper office or desk. (5) All obstructions removed and personnel of department may move by shortest and most direct route from place to place. (6) Portable partition moved so as to locate office of assistant superintendent where he is free from disturbance. (7) Partition eliminated (may be replaced later if necessary).

of the problem is quite simple, when put on paper, the condition shown in the old arrangement prevailed for several years.

Suggestive questions regarding present layout. The following list of questions <sup>5</sup> for use in checking present office layout is only suggestive. The office manager doubtless will wish to supplement them with many others which are more specifically applicable to his own situation. The primary purpose of presenting them is to indicate a simple and practical method of auditing and checking present office layout and appearance.

1. Is the office neat and orderly?
2. Are window sills, files, desks and tables free from disorderly piles of papers, books, file folders, or other material?
3. Have workers been instructed to maintain an orderly appearance and to clear desks of working papers each day before they leave?
4. Is there adequate equipment for filing or otherwise keeping working papers so that workers can maintain orderly appearance?
5. Are working materials arranged in proper order for efficient work?
6. Are there aisles enough for ready access to all working quarters?
7. Are main aisles and cross aisles wide enough?
8. Are aisles and desks arranged so that space is not wasted?
9. Do desks face so that light falls from the left on desks where work is done with pencil or pen, and so that workers at machines neither face bright windows nor themselves cut off light from keyboards?
10. Does the work always go forward without avoidable back and crosswise travel?
11. Are files, cabinets, and other records and materials located for convenience and ready access of those who use them?
12. Are machines, telephones, tube or conveyor stations, etc. located for convenience and ready access of those who use them?
13. Are files and other pieces of equipment, especially equipment above desk height, located so that they do not shut off natural or artificial light from working surfaces?

<sup>5</sup> "Check Your Office on These 333 Points," *Management Methods*. McGraw-Hill Publishing Company, Inc., New York, 1933.

14. Are files and other pieces of equipment, especially equipment above desk height, located so that they do not interfere with proper ventilation?

15. Are supervisors' desks well located, both for visibility of department or section, and for readiness of access by workers?

16. Is the number of private offices reduced to a minimum?

17. Has the working space been planned to provide large, open-office units—that is, has division into many small rooms been avoided?

## CHAPTER VI

### *Office Equipment and Appliances*

**Dependence of the office on equipment and appliances.** One has but to consider for a moment the tremendous dependence placed upon equipment and appliances in any office to realize at once the important part which these devices play in facilitating the handling of work in the modern business office. While the mechanizing of office operations has not kept full pace, perhaps, with the progress that has been made in factory work, recent years have witnessed cumulatively increasing attention to this subject.

Because of the importance of equipment and appliances in offices of all sizes and kinds, two chapters are devoted to this subject. In this chapter the advantages of using modern equipment and appliances, selection methods, standardization, usage, recording purchases and costs, and care and upkeep are discussed, while the following chapter is devoted to brief specific descriptions, with illustrations, of the more usual kinds of equipment and appliances.

**Reasons for increasing importance of office machinery.** There are a number of reasons why machinery is of increasing importance to the business office. For one thing the size of business organizations and the increase in clerical activities have made it necessary to find quicker and more effective ways of getting the office work done. Obviously, the use of modern office machinery is a distinct aid in this connection. Imagine, for example, the number of additional clerks who would be needed in the accounting department alone if no calculating machines were avail-



able! What would the modern office do without dictating machines, postage machines, cash registers, or punch-card equipment? No extended discussion is needed to emphasize the absolute dependence of offices on equipment and appliances of all kinds.

Furthermore, business organizations are finding more and more that it is necessary to secure a great amount of detailed information of a statistical nature regarding the operation of the business and the work of their employees. In the field of sales management, for example, many companies analyze sales by salesmen, by territories, by customers, by price classes, by the average profit, and calculate the cost per call per salesman. It is obvious that such information is extremely valuable, but it is also equally apparent that the use of mechanical office appliances is essential if such information is to be secured quickly and at a reasonable cost.

The appliance manufacturers themselves have promoted business and general public interest in office machinery by extensive campaigns of local and national advertising, and through the National Business Shows. At these exhibits, which are held annually in a number of the larger cities of the country, including New York and Chicago, office equipment and appliances of all sorts are shown. Expert operators are on hand to demonstrate the machines, and sales representatives are ready and eager to answer any questions. All of the exhibitors issue free tickets of admittance to customers and prospects and, as a result, the exhibit rooms are usually crowded at all times during the week of the show. The results which may be secured from an exhibit at the National Business Show by equipment manufacturers are shown in the statement made to the writer by the sales manager of one exhibiting company, who said that out of eighty live prospects developed as the direct result of the Show, thirty-five had been sold within one month and, if averages held, fifty out of the original eighty would buy eventually.

Investment of business in office equipment. In 1932 *Management Methods* made a study to determine the investment of representative companies in office equipment and appliances. The results of this survey are summarized in the following tables<sup>1</sup>:

TABLE I. PRESENT PURCHASE VALUE  
AND BOOK VALUE

Type of Business	Cost on Basis of Present Prices			Cost on Basis of Book Value		
	Average	High	Low	Average	High	Low
Manufacturing	\$426	\$1015	\$ 94	\$218*	\$ 752	\$ 56
Banks .....	558†	1356	333	481	1163	156
Life insurance	314	971	160	‡		
Wholesale ....	272	513	133	132	404	19
Retail .....	465	534	148	233	246	148
Utilities .....	366	374	222	364	374	155
Miscellaneous	437	730	187	247	538	80
Average ...	364			261		

\* None of the figures in this column includes companies who estimated the book value of their equipment and machinery as being 0.

† Large safes, and the like, explain the high figures in this group (banks).

‡ Insurance companies are not permitted to carry furniture or fixtures as an asset; accordingly, all amounts spent for such items are charged off as expense.

TABLE II. COST ACCORDING TO COMPANY  
SIZE CLASSIFICATION

Company Size	Average Cost on Basis of	
	Present-day Prices	Book Value now
In companies having less than 50 office workers	\$409	\$269
In companies having 50-100 office workers ....	434	306
In companies having 100-500 office workers ..	486	272
In companies having over 500 office workers ..	322	260

<sup>1</sup> "Yardsticks of Business Practice" (pamphlet), *Management Methods*, McGraw-Hill Publishing Company, Inc., New York.

TABLE III. AVERAGE DEPRECIATION RATES

Type of Business	On Equipment			On Machinery		
	Average %	High %	Low %	Average %	High %	Low %
Manufacturing .....	9.8	20	3	11.6	25	5
Banks .....	9.5	15	5	17.9	25	9.7
Wholesale .....	9.9	20	5	14.1	20	8.5
Retail chain stores ....	10.0	10	10	10.9	17.5	10.0
Utilities .....	10.0	10	10	10.0	10	10
Miscellaneous .....	10.1	16.6	5	15.0	33.3	10
Average .....	9.9			13.7		

TABLE IV. EQUIPMENT IN OFFICES

## A. Expressed in Number of Pieces for 100 Office Workers

Equipment	Manufacturing	Banks	Life Ins.	Wholesale
Desks .....	90.1	58.8	100.0	66.7
Tables .....	33.3	28.6	33.3	22.2
Chairs .....	150.0	125.0	170.0	125.
Files .....	200.0	75.0	200.0	150.0
Book cases .....	10.0	9.0	12.5	3.6
Typewriters .....	33.3	33.3	40.0	28.6
Adding and calculating machines .....	16.7	33.3	14.3	12.5

Equipment	Retail	Public Utilities	Miscellaneous	Average —All Businesses
Desks .....	62.5	100.0	90.1	76.9
Tables .....	30.0	18.2	16.7	28.6
Chairs .....	100.0	150.0	150.0	150.0
Files .....	150.0	100.0	100.0	150.0
Book cases .....	7.1	3.5	6.7	10.0
Typewriters .....	22.2	20.0	28.6	33.3
Adding and calculating machines .....	25.0	40.0	16.7	20.0

To compare the number of pieces of equipment or machinery for your office with the average as shown in this table, multiply the figure given above by the number of office workers you have, and move the decimal point two places more to the left: To find the average number of typewriters for an office of 85 office workers in a manufacturing business— $33.3 \times 85 = 2830.5$  for 8500 workers, or 28 for 85 workers.

## B. Expressed in Numbers of Office Workers to Each Machine

Bookkeeping machines .....	32	Duplicating machines .....	82
Addressing machines .....	77	Printing machines .....	87
Mailing machines .....	160	Photographing machines ....	73
Folding machines .....	223		

In commenting on these figures the editors said:

The combined figures for equipment and machinery mentioned represent an estimate, in each case, of the total value at present prices, without depreciation. It is interesting to note that many companies charge machinery and equipment to expense. This practice is obligatory with life insurance companies, as they are not permitted to carry these items as assets. Excluding companies who followed this practice, the book value of the three groups—manufacturers, wholesalers, and retailers—is about 50 per cent of the estimated value.

Table II shows that the high averages are among offices having fewer than 500 workers. This seems natural, as the larger offices buy in quantities which enable them to get better prices. The highest average figure, in offices having from 100 to 500 workers, may be due to the fact that these smaller companies indulge in extravagance, whereas those with over 500 workers have been working toward the elimination of excessive costs.

The rate of depreciation on equipment seems almost universally to be 10 per cent. The average for all companies reporting is 9.9 per cent (see Table III). Whether this is the result of careful thought or merely of inaccurate estimating is, naturally, open to question. The highest figure reported was 20 per cent and the lowest, 3 per cent.

Obsolescence is an important factor in determining depreciation. The best-managed companies use a 15 per cent rate, which means eliminating the asset in a little less than seven years. To wait until a desk or chair wears out is certainly not progressive management. In considering the obsolescence of machinery we find, according to the tabulations, that the average rate is 13.7 per cent, with examples as high as 33½ per cent (which is too great) and as low as 5 per cent which, again, is probably too small. Some types of machinery are undergoing improvement very rapidly, especially the newer types and, for such, a 20 per cent rate would not be too high. On other more thoroughly perfected types of office machines the rate can be as low as 10 per cent.

The trade-in value at various ages must also be considered.

Most manufacturers have well-established rules on this subject. Though most machines now being made will last a long period under heavy usage, it is a fact that after a few years the cost of upkeep and maintenance increases decidedly.

Table IV is interesting because it shows how extensively the various types of equipment are used. From this table one can prepare an estimate as to the standard amount of equipment needed for an average office of any size in the seven groups of industries named.

The foregoing figures not only give an indication of the investment in machinery and equipment by business organizations, but they also emphasize strongly the importance of such appliances from the financial point of view.

**Advantages of using mechanical devices.** Among the advantages which accrue to an office in which the maximum use is made of mechanical devices are the following:

1. Records can be produced more conveniently, more quickly, more legibly, and with a better appearance than in cases where the same work is done by hand.

2. Owing to the fact that the installation of a machine often permits a reduction in the number of employees engaged on a particular type of work, general overhead expenses are reduced and the machine may very likely pay for itself within a short time.

3. The standardization of methods and processes, which necessarily accompanies the use of a machine, makes it possible to employ less expensive labor.

4. Since most office appliances require an operator more or less specially trained for the work, the adoption of a machine brings about specialization, which, in turn, produces more work.

5. Owing to the fact that information of a statistical nature is more easily made available than when hand methods are in use, it is possible to secure a greater amount of periodical information of a statistical nature because of the ease of collecting it.

**Procedure in selecting the proper equipment.** When considering the purchase of any automatic office appliance,

the office manager should constantly bear in mind the fact that production capacity, operating speed, operating upkeep costs, and the length of life of a machine can be measured with considerable accuracy. Consequently, there is no reasonable excuse for an office manager's buying a machine merely because others have told him that they have found it effective in their work, or because many of his friends have such machines in their offices. Such recommendations are helpful and useful, of course, but their importance should not be overestimated. Moreover, it is important to bear in mind that the popularity of a particular make or type of machine does not necessarily mean that it is the one best suited for a given situation.

The limitations of an office machine should be investigated as well as its advantages, which are generally more thoroughly exploited. In this connection it is highly desirable that the office manager determine for himself, by means of a personal investigation, just what the experience of others has been with the device in question. A man does not buy an automobile solely on the word of the sales representative. Why should he be less careful in purchasing an office machine, especially in view of the fact that it may cost as much as or even more than the car?

Because the accomplishments of automatic office equipment can easily be ascertained, it is only common sense that the office manager have the actual performance of any machine he is considering demonstrated on his own work. All office-appliance companies are more than glad to have an opportunity to demonstrate the features of their particular product without charge to the prospect. Indeed, in many cases, a liberal free trial period under actual working conditions is offered. Consequently, under no circumstances should a machine be permanently installed until after it has proved itself to the satisfaction of everyone concerned.

Another point, which it is important to bear in mind in connection with the purchase of an office machine, is that it

may be necessary to make changes in the system of record keeping in use before the machine can be used effectively, if at all. Obviously, for example, a firm cannot change from hand posting of accounts to a system of machine posting without making certain changes in the size and form of the ledger sheets used. Changes in bookkeeping methods also may be found necessary. While no one would argue that all systems of record keeping are perfect just as they stand, it is obviously important to consider this matter carefully before making a purchase that will necessitate important changes in present procedures.

**Two specific cases.** While the selling price of an appliance is, of course, an important factor to be considered, it is not necessarily the most important one. Two cases, which recently came to the writer's attention, illustrate what is meant.

In one instance the nature of the clerical work performed in the main office of a large construction company necessitated constant calculations involving multiplication and division. Various calculating machines were investigated, and finally one costing several hundred dollars was purchased and installed in the office. The work was handled at a somewhat greater speed than when it was performed by hand; but, because only one employee could work at the machine at a time, the office manager still felt that increased facilities were necessary. He hesitated to recommend the purchase of a second calculating machine, because of its relatively high cost.

One evening he casually mentioned his problem to a friend—an engineer. "Why don't you provide each employee with a slide rule?" said his friend. "They are not expensive, they can't get out of order, and anyone can learn to use one in a very short time." The office manager agreed that that was an excellent suggestion. The next day he investigated the feasibility of furnishing each employee in the particular group with a slide rule, and a few days later he put through the order. Fortunately, he was

able to transfer his high-priced calculating machine to the statistical department, so that the company did not suffer any great loss by his ill-advised initial purchase.

On the other hand, the case of a well-known manufacturing concern illustrates the poor judgment often displayed in refusing to consider the purchase of a machine simply because the price is relatively high. In this company the products are so varied in number, and, in many cases, are assembled from so many separate parts, that it is necessary to keep several thousand stock-record cards. Because of the nature of the business, it is also essential that these cards not only be kept accurately, but that they be kept posted up to date at all times. Four clerks, at an average salary of \$25 a week apiece, were spending their entire time in posting the stock records by hand. In addition, a fifth employee spent part of his time supervising the work.

Various business acquaintances had urged the department head who was in general charge of this work to buy, or at least to try, a certain make of mechanical device. The price of this machine was \$1,000. The department head persistently refused even to consider the device, saying that because a request for two typewriters costing but a fraction of the price of the stock-card posting appliance had recently been questioned, he was sure that he could not get permission to spend \$1,000 for one new machine, no matter how good it might be.

"Let's look at it another way," said one of these friends one day. "We know, from the records of performance of this machine under similar conditions in other firms, that with it one person can do the work which it now requires four clerks to handle. To be conservative, assume that it will be necessary to pay this one person \$30 per week instead of \$25. This means that in direct salary costs alone you can save, week in and week out, practically the entire salary of three employees—\$70 per week to be exact. Even making a liberal allowance for depreciation, repairs, and general carrying charges, including, if you wish, interest at



6 per cent per year on the \$1,000, the machine will more than pay for itself inside of six months."

Needless to say, not only was the department head convinced, but he had no trouble in making his superior see the ultimate economy of installing the machine.

**Equipment as an investment.** These illustrations clearly emphasize the fact that money spent on the purchase of mechanical office devices should be regarded as an investment rather than as a non-productive expense. In the commonly accepted interpretation of the word, an investment yields a continually profitable return. In the case of the calculating machine cited above, the return on the investment was entirely too small to warrant its purchase. In the other instance, the department head took an entirely wrong attitude toward the \$1,000. As soon as the investment aspect of the matter, rather than the immediate cost, was presented to him, he saw the whole situation in a different light.

**Securing maximum usage.** There is still another aspect of the matter of installing mechanical office devices which should receive more attention in practice than it sometimes does. Often one will find that a mechanical device was purchased at a time when all signs pointed to its necessity and usefulness. Within a few months, however, the machine may be found to be standing in the corner accumulating dust from lack of use. Those who were originally expected to operate the machine are not using it, but have reverted to the methods previously used, often because they feel that the new machine is more bother than it is worth.

Before purchasing any mechanical office device, the office manager should be very sure not only that a definite need exists for the machine, but also that those who are to use it are fully sold on its purchase. In one well-known company, for example, most suggestions for the purchase of new devices come from the workers themselves. It is fully understood by everyone that, no matter how much time the machine may save or how many less employees may be

needed on the particular operation, no one will lose his position on account of the use of the machine. Obviously all of the advantages accruing to the company which installs modern office machinery are lost, if, after the appliance is purchased, it is not used.

It is also of the utmost importance that those who are to operate the machine be thoroughly instructed in the details of its operation and in regard to the variety of operations which it will perform. There is, for example, a make of calculating machine which adds and subtracts directly, and on which multiplication and division calculations may be easily performed. In many cases, however, 50 per cent or less of the maximum possible usage of the machine is secured, due to the fact that the operator has not been fully instructed in division and multiplication methods. Such a situation is the fault both of the manufacturer's representative and of the office manager. Obviously it is one against which both should do their utmost to guard.

**Jantzen Knitting Mills.** The following description of the various uses which are made of bookkeeping machines at the Jantzen Knitting Mills is an excellent specific illustration of how maximum usage of mechanical office equipment can and should be secured.<sup>2</sup>

People who are well informed about the use of bookkeeping and billing machines say that more than three-quarters of all companies using them use them for only one purpose—generally for accounts receivable. In almost every company there are several worthwhile uses for such machines. At the Jantzen Knitting Mills, where billing and bookkeeping machines have been used for over ten years, the accounts receivable department, the shipping department, and the payroll department all enjoy the advantages of mechanized office work.

In the shipping department, invoices are written in sets of six copies each on an eleven-inch continuous-form bookkeeping machine. Two machine are employed, each equipped with hand-cleared registers that accumulate the totals of individual bills and the total amounts of each day's billings. Use of these

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<sup>2</sup> *System*, November, 1931.

machines has resulted in accuracy of the billing operation and in neat legible copies of invoices. No time is lost in handling loose sheets of carbon paper or in aligning and realigning sets of invoice forms.

In the accounts receivable department the accounting machine collates and writes the customer's statement, the ledger sheet, and an automatic audit sheet (on blank paper) in one operation. A sixteen-inch machine equipped with crossfooter and column registers is used. Customers' statements are always immediately available for mailing, and all accounts are kept in perpetual balance. Each day the work is balanced and proved accurate.

In the payroll department the pay check, the employees' earnings record, and the payroll audit sheet are written at once. The individual earning records give the details of all amounts paid employees. A sixteen-inch machine with crossfooter and column registers is used. The pay roll use is the most recent of these three uses of accounting machines. This arrangement enables the company to write the checks, enter the complete payroll data on the individual operator's record, and post the complete information on the payroll at one writing.

**Standardization of equipment.** The two principal practical advantages gained by a company that standardizes on a particular make and kind of equipment are greater efficiency of operation and economy of purchase. If, for example, all the typewriters and dictating equipment in the office are identical, it is obvious that no time is lost by employees in learning how to operate the equipment when they are transferred from one department to another. Furthermore, by concentrating purchases on one make of equipment, companies often can secure equipment at lower unit prices by taking advantage of quantity discounts or long-term purchase contracts. Standardization also may result in a net saving in the amount of equipment needed, because all units are interchangeable. In addition, maintenance and repair costs are likely to be reduced.

It should not be assumed from the foregoing, however, that opportunities for standardization of equipment are unlimited. Obviously different types of work require different kinds of equipment. The desk and chair needed

by the executive are not of the type best suited to the requirements of the clerk. In certain cases a listing type of adding machine is essential; the non-listing type is best suited to other kinds of work. Standardization, obviously, has definite limitations beyond which it is not practical or desirable to go.

### Standardization procedure of the Canadian National Railways.<sup>3</sup>

The practices of the Canadian National Railways are an excellent illustration of a well-thought-out plan for the control and standardization of office machines and equipment. When the plan was introduced two blank inventory forms were designed, one for furniture and one for machines (Figures 13 and 14).

OFFICE EQUIPMENT INVENTORY MACHINES								
OFFICE _____		No. OF OFFICE STAFF _____		DATE _____ 19__				
PLACE _____								
CLASS OF MACHINE	MAKE OF MACHINE	MODEL NUMBER	SERIAL NUMBER	SIZE OR DESCRIPTION	CONDITION (Good, Fair or Poor indicate S, F, or P.)	ESTIMATED AGE	AVERAGE HOURS DAILY USE	APPROXIMATE DATE OF LAST OVERHAUL
					CERTIFIED CORRECT AND THAT THERE IS NO SURPLUS MACHINE OTHER THAN SO MARKED "SURPLUS" IN LAST COLUMN.			
					SIGNATURE _____			
					TITLE _____			

WHEN THERE IS ROOM A NUMBER OF OFFICES AT THE SAME POINT, AND IN THE SAME DEPT. MAY BE LISTED ON ONE SHEET, IF NAME OF OFFICE AND NUMBER OF STAFF IS SHOWN FOR EACH OFFICE.

Fig. 13.—Office Equipment Inventory—Machines.

These were distributed to every office in the system with instructions that they be filled in and returned to Office Services on a certain date each year. Inventories thus submitted provided a record of the equipment in use in each office and permitted a comparison of the relative equipment requirements. This, in turn, made it possible to establish approximate standards as to the amount of machine equipment necessary for various volumes and types of business.

Two primary record files are maintained. One is a Current

<sup>3</sup> Adapted from *Standardization of Equipment*. Policyholders Service Bureau, Metropolitan Life Insurance Co.

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Equipment Inventory with a special designation for surplus or inactive equipment. For purposes of controlling surplus office equipment, a special form of report (illustrated in Figure 15) is prepared for each shipment of surplus equipment received or issued from surplus stores. (A slightly different form is used for office machines.) One copy of this report is sent to Office Services.

The other record is the Office Equipment Standards File, consisting of a separate card for each type of machine or equipment. The form of this card record and the information recorded is illustrated in Figure 16. The reverse side of the card

OFFICE EQUIPMENT INVENTORY FURNITURE						
OFFICE OF _____				NO. OF OFFICE STAFF _____		DATE _____ 19__
PLACE _____						
CLASS OF FURNITURE	COLOR	MATERIAL	SIZE	DESCRIPTION (OTHER)	EST. MAINT. AGE	NAME OF POSITION OF EMPLOYEE USING FURNITURE
<div style="display: flex; justify-content: space-between;"> <div style="width: 15%;"> <b>EXAMPLES:</b>            FILE CABINET            DESK            DESK            CHAIR            CHAIR         </div> <div style="width: 15%;">           GREEN            LIGHT OAK            MAHOGANY            LIGHT OAK            DARK OAK         </div> <div style="width: 10%;">           METAL            WOOD            WOOD            WOOD            WOOD         </div> <div style="width: 10%;">           CAP.            34" x 60"            30" x 42"            -- -- --            -- -- --         </div> <div style="width: 30%;">           4 DRAWER            FLAT TOP—5 DRAWER            SINGLE PEDESTAL—DROP BED            SIDE            ARM SWIVEL TILTER         </div> <div style="width: 10%;">           2 YEARS            3 YEARS            4 YEARS            2 YEARS            12 YEARS         </div> </div>						
WHEN THERE IS ROOM, A NUMBER OF OFFICES AT THE SAME POINT, AND IN THE SAME DEPT., MAY BE LISTED ON ONE SHEET, IF NAME OF OFFICE AND NUMBER OF STAFF IS SHOWN FOR EACH OFFICE.						CERTIFIED CORRECT AND THAT THERE IS NO SURPLUS FURNITURE OTHER THAN SO MARKED ON THIS INVENTORY.  _____ SIGNATURE  _____ TITLE

Fig. 14.—Office Equipment Inventory—Furniture.

provides for attaching a catalog cut of the item and for notation of special features and specifications. These cards are filed according to the name of the position or office to which the equipment applies, as well as by type of equipment.

With the primary objectives of securing the benefits of quantity purchases, interchangeability, and minimum maintenance costs, equipment standardization in this company takes into consideration the following ten points:

1. Original cost of equipment.
2. Guarantee.
3. Durability.
4. Portability.
5. Repair service.
6. Maintenance cost and depreciation.
7. Operating cost including supplies.
8. Production capacity and average expectation.

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Fig. 15.—Report of Surplus Furniture.

9. Functional adaptability, where a machine might be adapted to different kinds of work.
10. Competitive costs of different types of machines for any special class of work.

As a means of establishing the need for each piece of equipment purchased, two forms are provided for recording all the

## OFFICE SERVICES—OFFICE EQUIPMENT STANDARDS

CARD—OS EQUIPT. STANDARD FILE NO. \_\_\_\_\_

Type of Equipt. \_\_\_\_\_ Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_

No. of Cat. \_\_\_\_\_ Page No. \_\_\_\_\_ Catalog No. of Equipt. \_\_\_\_\_

Canadian Gross Price \_\_\_\_\_ Discount (if any) \_\_\_\_\_ Net Price \_\_\_\_\_

U. S. A. Gross Price \_\_\_\_\_ Discount (if any) \_\_\_\_\_ Net Price \_\_\_\_\_

Adopted as standard for (name of position) \_\_\_\_\_ Date \_\_\_\_\_

Adopted as standard for (Type of work—give full description of work and application of this equipment to this work) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

File No. of test which resulted in selection of above equipment as standard \_\_\_\_\_

Average life—(take twelve cases of replacement and mark file number of requisitions and average life) RESULT OF TWELVE CASES

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Trade out allowances \_\_\_\_\_

(SEE REVERSE SIDE OF CARD FOR CUT  
AND SPECIFICATIONS)

Fig. 16.—Office Equipment Standards Card.

necessary data regarding its proposed use. These forms (Figure 17 for office machines and Figure 18 for office furniture) must be completed and submitted with each requisition, whether for additional equipment or for replacements. The information requested on the forms has been simplified as much as possible, so as to minimize the burden on the requisitioning department, but is designed to provide a check on all unnecessary expendi-

tures. In some cases supplementary information must be called for as the investigation progresses.

When all the necessary information has been secured, each case requiring investigation is individually considered by the Office Service staff. This includes a check against the surplus inventory record to determine whether the article is on hand or must be purchased, and reference to the Office Equipment Standards File. Where necessary, comparative tests of competitive prod-

## REQUISITION DATA—OFFICE MACHINES

OFFICE OF \_\_\_\_\_ REQUISITION NUMBER \_\_\_\_\_

ADDRESS \_\_\_\_\_ DATE \_\_\_\_\_ 19\_\_

1. TYPE OF MACHINE REQUIRED (EXAMPLE: TYPEWRITER, ADDER, ETC.) \_\_\_\_\_  
CALCULATOR, DUPLICATOR, TYPEWRITER, ADDER, ETC.

2. FOR TYPEWRITER STATE PERCENTAGE OF CORRESPONDENCE \_\_\_\_\_% STATEMENTS \_\_\_\_\_% CARD WRITING \_\_\_\_\_%  
 FOR ADDER OR CALCULATOR, STATE PERCENTAGE OF ADDITION \_\_\_\_\_% MULTIPLICATION \_\_\_\_\_% SUBTRACTION \_\_\_\_\_%  
 DIVISION \_\_\_\_\_% PERCENTAGE OR RATIOS \_\_\_\_\_% NUMBER OF COLUMNS \_\_\_\_\_%  
 FOR DUPLICATOR \_\_\_\_\_% OF WORK REQUIRES \_\_\_\_\_ COPIES \_\_\_\_\_% OF WORK REQUIRES \_\_\_\_\_ COPIES LARGEST SIZE  
 PAPER TO BE DUPLICATED \_\_\_\_\_

3. DESCRIBE THE WORK TO BE DONE ON THIS MACHINE, AND STATE IF THE WORK REQUIRES OTHER THAN STANDARD MACHINE SUCH AS WIDE  
 CARRIAGE, SPECIAL KEYBOARD, DECIMAL TABULATOR, ETC. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

(NO. 4 TYPE (14 TO 1 INCH) IS THE MOST SATISFACTORY AND ECONOMICAL TYPE FOR TYPEWRITER, AND WILL BE SUPPLIED UNLESS OTHERWISE SPECIFIED)

4. IF ADDITIONAL MACHINE, HOW IS THIS WORK DONE NOW? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

5. ANTICIPATED NUMBER OF HOURS DAILY USE IN YOUR OFFICE \_\_\_\_\_  
 6. WILL IT BE AVAILABLE FOR USE OF OTHER OFFICES? \_\_\_\_\_ IF SO, HOW MANY HOURS? \_\_\_\_\_

7. MACHINE TO BE TRADED IN, IF ANY: (IF FOR MORE THAN ONE MACHINE, GIVE SIMILAR INFORMATION FOR EACH EXTRA MACHINE ON BACK OF THIS FORM.)  
 A. MAKE? \_\_\_\_\_ D. DATE AND COST OF LAST OVERHAUL? \_\_\_\_\_  
 B. MODEL NUMBER? \_\_\_\_\_ E. PRESENT OVERHAUL ESTIMATE? \_\_\_\_\_  
 C. SERIAL NUMBER? \_\_\_\_\_ F. ESTIMATE MADE BY? \_\_\_\_\_

8. WHAT DIFFERENT MAKES OF THIS TYPE OF MACHINE DO YOU NOW USE IN YOUR OFFICE? (GIVE TOTAL NUMBER OF EACH MAKE AND MODEL) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9. GIVE FULL DETAILS OF THE SAVING, IF ANY, WHICH WILL JUSTIFY FILLING THIS REQUISITION. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

10. APART FROM THE FAMILIARITY OF YOUR OFFICE STAFF WITH THE ABOVE MAKE OF MACHINE, IS THERE ANY ESSENTIAL REASON WHY ANOTHER  
 STANDARD MAKE OF THE SAME TYPE OF MACHINE SHOULD NOT BE FURNISHED? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DATE \_\_\_\_\_ 19\_\_ OFFICER \_\_\_\_\_  
 TITLE \_\_\_\_\_

## INSTRUCTIONS FOR USE OF THIS FORM

THIS FORM IS TO BE ATTACHED TO ALL REQUISITIONS FOR OFFICE MACHINES.  
 MANUFACTURERS' NAME SHOULD NOT BE SHOWN ON REQUISITION.  
 GIVE AS MUCH INFORMATION AS POSSIBLE IN ANSWER TO THE ABOVE QUESTIONS.  
 D. MARK "OVER" AND USE BACK OF FORM.

Fig. 17.—Requisition Data—Office Machines.



ucts are conducted, the practice of running two independent tests for checking purposes being followed in most cases. After full investigation, a digest report, containing definite reasons why the requisition should or should not be approved, how it can be filled within the standards at the least expense to the railroad, including costs, savings and suggested action to be taken, is prepared by the manager of Office Services and submitted to the office of the president or the vice-president in duplicate for formal approval.

REQUISITION DATA—OFFICE FURNITURE	
OFFICE OF _____	REQUISITION NO. _____
ADDRESS _____	DATE _____ 19__
<small>(GIVE FULL PARTICULARS AS TO)</small> 1. FURNITURE REQUIRED? TYPE, COLOR, SIZE, ETC. _____ _____ _____	
2. IF REPLACEMENT OR ADDITION? _____ 3. IF REPLACEMENT, WHAT DOES IT REPLACE? _____ A. GIVE AGE AND CONDITION _____ B. STATE PROPOSED DISPOSITION? _____	
<small>(IF OTHERWISE, FURNISH DETAILS IN SPACE FOR REMARKS BELOW)</small> 3. IF ADDITIONAL, IS IT FOR EXTRA CLERK? _____ A. PERMANENT OR TEMPORARY CLERK? _____ B. IF CLERK TRANSFERRED FROM ANOTHER OFFICE, GIVE REASON FOR NO TRANSFER OF FURNITURE? _____ _____	
4. POSITION OF EMPLOYEE WHO WILL USE THIS FURNITURE? _____ 5. IF FILE OR INDEX CABINET, GIVE NUMBER AND SIZE OF PRESENT CABINETS AND DRAWERS _____ _____ A. DESCRIBE CONTENTS? _____ B. CAN ANY OF THE CONTENTS BE TRANSFERRED? _____ C. WHEN WERE THEY LAST COMPLETELY REVIEWED FOR TRANSFER? _____ D. WHAT IS THE PRESENT OVERFLOW (IN INCHES) WHICH CANNOT BE PROVIDED FOR BY TRANSFERRING OTHER RECORDS? _____ _____	
<small>FURNITURE HAVE DISCLOSED THAT IN THE AVERAGE OFFICE OVER 15% OF THE SPACE IN FILING CABINETS IS OCCUPIED BY DEAD AND DORMANT RECORDS WHICH SHOULD BE TRANSFERRED INTO WOOD-BRANDED TRANSFER CASES. THIS SHOULD BE CONSIDERED IN FURNITURE.</small> 6. HAS IT BEEN DEFINITELY DETERMINED THAT THERE IS NO SURPLUS FURNITURE THAT COULD BE REPAIRED, CLEANED OR REFINISHED TO FILL THIS REQUIREMENT? _____ 7. APART FROM MATCHING COLOR AND DESIGN OF PRESENT FURNITURE, WOULD USED FURNITURE BE SUITABLE? _____ _____ 8. HAS CONSIDERATION BEEN GIVEN TO POSSIBLE REARRANGEMENT OF PRESENT FURNITURE AND STAFF TO SAVE THIS EXPENDITURE? _____ 9. REMARKS _____ _____ _____ _____	
DATE _____ 19__	OFFICER _____  TITLE _____
<small>INSTRUCTIONS FOR USE OF THIS FORM</small> <small>THIS FORM IS TO BE ATTACHED TO ALL REQUISITIONS FOR OFFICE FURNITURE</small> <small>MANUFACTURERS' NAME SHOULD NOT BE SHOWN ON REQUISITION</small> <small>GIVE AS MUCH INFORMATION AS POSSIBLE IN ANSWER TO THE ABOVE QUESTIONS</small> <small>IF MORE SPACE REQUIRED, MARK "OVER" AND USE BACK OF FORM</small>	

Fig. 18.—Requisition Data—Office Furniture.

The foregoing procedure has been used by this company over a period of several years and has resulted in an estimated saving of more than 15 per cent of the total value of the items involved in over one thousand requisitions handled during that time. The plan of providing for the uniform and complete presentation of the supporting data required has facilitated executive action and permitted better-informed decisions as to whether (a) the purchase should be approved, (b) less expensive but equally suitable equipment should be substituted, (c) idle or surplus equipment should be transferred, or (d) the request should be canceled.

**Henry L. Doherty & Company.** The procedure followed in connection with the standardization and control of office equipment in Henry L. Doherty & Company is also of interest.\*

For purposes of convenience, office necessities are segregated into five groups as follows:

1. Fixed Equipment—items usually installed on floor prior to placement of actual office equipment.
2. Office Equipment—furniture, files, shelving, etc.
3. Office Machines and Appliances.
4. Office Forms—printed, processed, mimeographed, etc.
5. Office Supplies—clips, carbon paper, etc.

As in other organizations, the first step toward standardization in this company was a complete inventory of furniture and fixtures. This was conducted by the planning department, set up on individual inventory cards, and is revised currently. As each new equipment purchase is paid for by the accounting department, a new inventory card is written and forwarded to the planning department for the inventory file.

As the occasion arises, the planning department conducts investigations and tests of office equipment from which standards are developed. After discussion with the departments directly affected, the standards recommended are submitted in the form of a report to the general office manager and become effective on his approval. Revisions of standards, when necessary, are carried out in the same manner.

The company has not attempted to standardize too rigidly in the machine field except for equipment of such a general nature

\* Adapted from *Standardization of Equipment*. Policyholders Service Bureau, Metropolitan Life Insurance Co.

that its use is practically the same in all departments. Machines of higher complexity, the use of which is more closely related to accounting and other methods, are selected largely from the standpoint of the special requirements of the specific jobs. Consideration is always given, however, to the feature of interchangeability, it being the policy to favor a combination of two relatively simple machines over a highly specialized model if use elsewhere in the company is facilitated thereby.

From a practical standpoint, this company has found it inadvisable to attempt the wholesale introduction of new standards on an arbitrary basis, but accomplishes this primarily as replacements are made. Many items that are approximately standard are retained until they can be disposed of advantageously in the second-hand market. Others are sold as junk or are segregated on a storage floor for use in short rush emergencies. An excess equipment inventory is maintained for the latter items.

To control purchases in line with the standards established, a special form of purchase requisition has been designed including a stub requiring the formal approval of the planning department before the purchase can be made. In the interests of simplicity, however, only the more important items, from the standpoint of the dollar volume involved, are so referred. These include rentals and purchases of communication equipment, fixed and movable office equipment, and office forms of all kinds. Standards on other items are checked periodically, these being usually of a type that are ordered in large quantities over a year and stored with the vendors or in the printing plant subject to release when needed.

**Care and maintenance of office equipment.** Adequate provision should be made for safeguarding the important investment which every company necessarily makes in office equipment. The experience and practice of the Procter & Gamble Company indicate both the scope of the problem and the manner in which this company handles such matters.<sup>5</sup>

### Office furniture.

The long life of office furniture, assuming that it is given reasonable care, makes this a relatively simple problem. For ex-

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<sup>5</sup> Adapted from Berni, I. J., "Movable Office Equipment," *Annual Proceedings*, pp. 30-33. National Office Management Association, 1933.

ample, many of the desks in this company have been in service from fifteen to twenty years. While many of the desk tops have been protected by glass, the company is gradually eliminating glass tops by not replacing any that crack or are broken. When the condition of the desk requires it, it has been found that the most desirable, economical and practical covering, which makes the desk practically as good as new, is a covering of specially prepared desk-top linoleum. This is green in color, and harmonizes well with mahogany-finished furniture. This linoleum top has been found to be much easier on the eyes, as it eliminates the glare of the glass or of a polished desk top; it is easier to write on, providing a soft yet substantial writing surface; it is easy to clean, and even the handling of heavy books will not mar its surface, as it is resilient. All of the newer steel desks come equipped with this special linoleum, although there is a slight distinction between that used on steel desks and that used on wooden desks.

Filing equipment is also an item of unusually long life which requires very little care. Open shelving can be used to good advantage for much of the bulky material formerly stored in filing cabinets, particularly when the material is bound. The open shelving, in addition to being less expensive, makes much easier and quicker reference possible.

### **Maintenance and service contracts.**

Office machinery presents the major problems of care and upkeep. For several years the company had rather discouraged the efforts which the various office equipment companies had made to sell it service and maintenance contracts. Generally speaking, all of the electrically driven machines in the company and several others that had constant and hard usage were under contract for maintenance. On the remainder the practice had been to call a service man from one of the local agencies whenever there was need for service. However, when an investigation revealed that there was a decided upward trend in maintenance costs, serious consideration was given to the matter of employing a specially trained mechanic for the purpose of servicing the machines, just as several other large local organizations had done. However, upon making inquiry it was found that their most important item was a matter of emergency service on accounting machines, which seemed to have a way of getting out of order at the most critical periods of the month. Fortunately, this did not happen to be much of a problem in this company. The advantages of almost instantaneous service in

the event of breakdown were quite apparent, but after going into the matter of expense involved, the company found that it was paying less for repairs and maintenance than it would cost to employ a competent mechanic to do the same work.

Again, experience over a period of years seemed to indicate that when there was a general breakdown, the cost of a general overhauling was hardly justified. For the most part, therefore, the practice of trading in typewriters after three and a half to four years of service was followed, the company receiving a substantial trade-in allowance, and keeping repair calls per machine to a minimum. Adding machines and calculating machines were also run as long as they stood up; when repair calls became noticeably frequent an estimate for a general overhauling was obtained, but as a rule, the old machines were traded in.

### Establishment of a service department.

In 1931 the question of equipment maintenance costs was re-studied. This time the company decided to establish its own service and maintenance department, largely because it was felt that it would be more economical to do so. The company had a young man who had been employed as a stock-room clerk, who had shown mechanical aptitude. When the work this young man had been doing was somewhat curtailed, it was decided to fill in his spare time by having him service (that is, oil and clean) office machines. Outside of knowing how to operate an adding machine and possessing a limited ability as a typist, he knew next to nothing about office machines.

As a start, arrangements were made with a local typewriter agency, whose representatives were most coöperative, for the young man to spend approximately two weeks in their repair shop for the purpose of learning the job of cleaning and oiling typewriters. A ten-by-eight-foot space in the stock room was set aside, and an ordinary stationary laundry tub with hot and cold water was installed. The carpenter then made a drying box thirty inches square and about twenty-four inches high, equipped it with a lid, and heated it with two 200-watt lamps. A work bench and a vise and a limited number of tools, such as are used by the mechanics in the service agency shops, were also provided. Outside of the installation of the laundry tub, the entire outlay was less than \$25.00.

Within a very short time the mechanic was able to thoroughly clean, overhaul, and replace worn and defective parts, and to oil a typewriter in from six to eight hours. The cost of the parts used was an insignificant item, as compared to the expense in-

curred when these parts are installed by a service agency. There is no difficulty in the purchase of these parts, as they are, of course, standard items.

It was soon recognized that taking care of the office machines was easily a full-time job, and that substantial economies could be effected by such an arrangement. Consequently after the new service man had overhauled and cleaned about thirty typewriters he was gradually broken in on the care and upkeep of the other more commonly used office machines, including dictating-machine equipment, adding machines, and calculating machines. At first the mechanic performed only those duties usually included in maintenance contracts, which incidentally were canceled as they expired—namely, cleaning and oiling—but gradually he handled the overhauling of these machines as well.

While some of the office-equipment agencies were most co-operative in assisting in the training of the mechanic, others were not inclined in this direction. A free-lance mechanic who had had factory training on office machines was therefore engaged, with the understanding that the company's own man would work with him and absorb as much as possible pertaining to the machines being worked on. In approximately six months the service man was able to handle very satisfactorily fully 95 per cent of the mechanical difficulties he encountered.

The present schedule calls for a monthly oiling of some machines, while others are scheduled for a monthly cleaning as well. Once each year most of the machinery is thoroughly overhauled and cleaned, and any worn or defective parts are replaced.

### Advantages of a company-operated service department.

As the company sees them, the advantages that have been secured from the foregoing arrangement are as follows:

1. Instantaneous service is always available. The abuse of this feature is checked by charging each department with the time spent on the machines of that department, at an average rate per hour.

2. A material saving in service and maintenance is effected, and a better servicing job is done.

3. The physical condition of all machines is known. When outside agency service contracts are used, the company is governed largely by their recommendations regarding trade-ins.

4. Knowledge of the physical condition of machines has made it possible to rotate machines to lighter jobs as they become older and more worn. This has the dual advantage of assigning the

machines in the best condition to the more efficient operators, or to those who use them most, thereby securing longer use of the machines and thus reducing depreciation costs.

5. The outstanding advantage, however, is that with the regular service and the yearly overhauling, breakdowns are avoided, because much better routine care is taken of the machines and worn parts are replaced before the damage is done. In this way the useful length of life of the machines is materially increased.

The only records that have been found necessary are a simple card index (a separate card for each machine), showing date and nature of work accomplished, and a daily time sheet, on which the time spent on each machine, the nature of the work done, and the department for whom the work is done are entered. This record is the one from which the department charges mentioned above are compiled each month.

## CHAPTER VII

### *Office Equipment and Appliances (Continued)*

**Scope of the discussion.** In the previous chapter the advantages of using modern office appliances, selection methods, standardization, and the care and maintenance of equipment were discussed. We turn now to a more specific and detailed discussion of the important types of equipment and machinery found in representative business offices.

Four points should be borne in mind in connection with the material in this chapter. First, the discussion is confined to statements regarding the machines themselves, what they will do, and how they do it. Second, for obvious reasons, manufacturers' names have been omitted in the text. However, full credit has been given to equipment manufacturers whose appliances are illustrated. Third, no attempt has been made to describe in minute detail the purely mechanical operation and parts of the various machines. Fourth, only information pertaining to equipment and appliances which are generally in common use in offices is given. Thus certain devices with which some readers may be familiar may not be mentioned. In other words, the purpose of this chapter is to present a survey of what the field offers, rather than to be an encyclopedia of office appliances.

**The clerical desk.** The type of desk most commonly used in offices is known as the clerical desk, as distinguished from the stenographic desk. In selecting desks one should always remember that the chief use made of a desk by the



average clerk is for writing purposes rather than storage space. The two most satisfactory desks for clerical purposes are the double-pedestal type, 60 by 36 inches in size, containing five drawers and four legs, and the single-pedestal desk, 42 by 30 inches in size, containing three drawers and four legs.

A simple illustration will show clearly that the matter of size is an important item. A desk 6 feet by 3 in size, for example, occupies 18 square feet. The clerk seated at it must occupy at least 15 feet more, or a total of 33 square feet in all. One will very frequently find desks of this size being used by clerks, although they are much larger than is necessary for almost any operation. On the other hand,

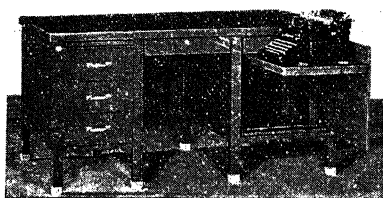


Fig. 19.—Secretarial Desk. *Courtesy of Art Metal Construction Company.*

a desk 4 feet by 2½ will not occupy more than 20 square feet, including the seating space of the occupant. Considering the difference of 13 square feet at four dollars per square foot per year, which is not an uncommon charge for office space, it is apparent that

fifty-two dollars per year, or a dollar a week, is being paid for wasted office space.

**Stenographic and secretarial desks.** For persons engaged solely in work requiring the use of a typewriter, the stenographic desk, 54 or 55 by 30 or 32, is recommended. This is a four-drawer, four-legged desk in which the typewriter is always in position for work, and is placed in the middle of the desk.

For employees who may do some typing and also a certain amount of clerical work, as in the case of a private secretary, the secretarial desk, in which the typewriter occupies the space normally occupied by the two lower left- or right-hand drawers, has been designed. This leaves the writing surface constantly free for papers, and at the same time makes the typewriter available for immediate use

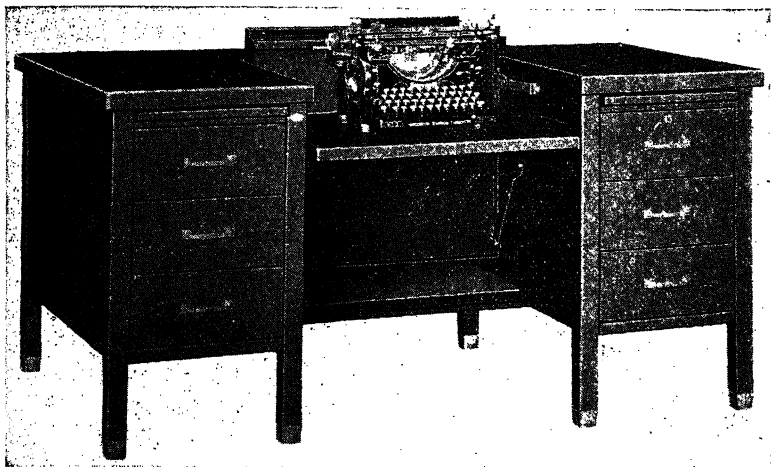


Fig. 20.—Double-Pedestal Typewriter Desk. *Courtesy of Art Metal Construction Company.*

when it is needed. At night the typewriter is let down and pushed forward into the desk under the writing surface, thus giving the impression of a regular four-drawer, double-pedestal desk.

**The executive desk.** A double-pedestal, five- or seven-drawer desk, 66 by 36 or 38 inches, is recommended for use by executives. In an increasing number of offices executives are using flat-top tables for much of their work. In this case the table is usually placed behind the chair so that, by simply turning around, either the desk or the table can be used without moving the chair or getting up. The use of the table makes it possible for the executive to have a considerable number of papers, reports, and other material for reference use constantly at hand, and yet to have ample space on his desk for ordinary writing, for signing letters, and so on.

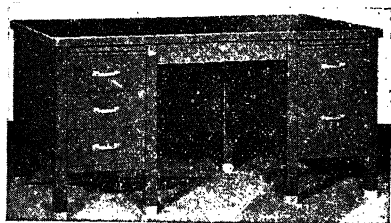


Fig. 21.—Double-Pedestal Flat-Top Desk. *Courtesy of Art Metal Construction Company.*

**Office tables.** Office tables should be the same size as clerical desks, that is, 60 by 36 and 42 by 30 inches. When used as working units they should have linoleum tops and two drawers, with a tray for pens, pencils, clips, and so on in one drawer. For tables, the average height from the floor is 30 inches. Where tables are used by a number of different people who are working constantly at them, it is highly desirable that some sort of a foot rest be provided. The matter of adjusting the height of the working surface to the needs of the worker is usually taken care of by adjusting the chair rather than the table.

When executives make use of a table, the size should correspond with the size of the desk, that is, 60 by 36 or 66 by 38 inches.

**Executive, clerical, and stenographic chairs.** Four main types of chairs are in office use. The (1) straight-back chair and the (2) adjustable swivel chair with arms are the ones commonly used by executives. The (3) same general type as mentioned above, but without arms, is manufactured in a variety of forms. This type of chair is used principally for stenographic purposes. The (4) non-swivel type of armchair is usually placed for the visitor beside an executive's desk.

Authorities agree that there is a definite relationship between correct posture and seating facilities and the quality and quantity of work. As a result, attention to the type of chair best suited to each kind of work has increased considerably in recent years. Posture chairs especially designed for office workers are available and are used in a considerable number of offices.

**Files.** Filing cabinets of all types may be secured in either wood or steel. The four-drawer vertical filing cabinet, of either kind of material, made to hold 8½ by 11 inch papers, is the standard and usual piece of filing equipment. Practically all equipment manufacturers, however, produce as standard models vertical files designed to hold papers or cards of sizes other than 8½ by 11 inches, ranging all the

way from 3 by 5 to 11 by 17 inches. Where the nature of the business is such that customers frequently call at the office, counter-height files are often used to advantage. Such files, in reality, are three-drawer rather than four-drawer, thus making the total height convenient for counter purposes. Not only does the use of such files save space,

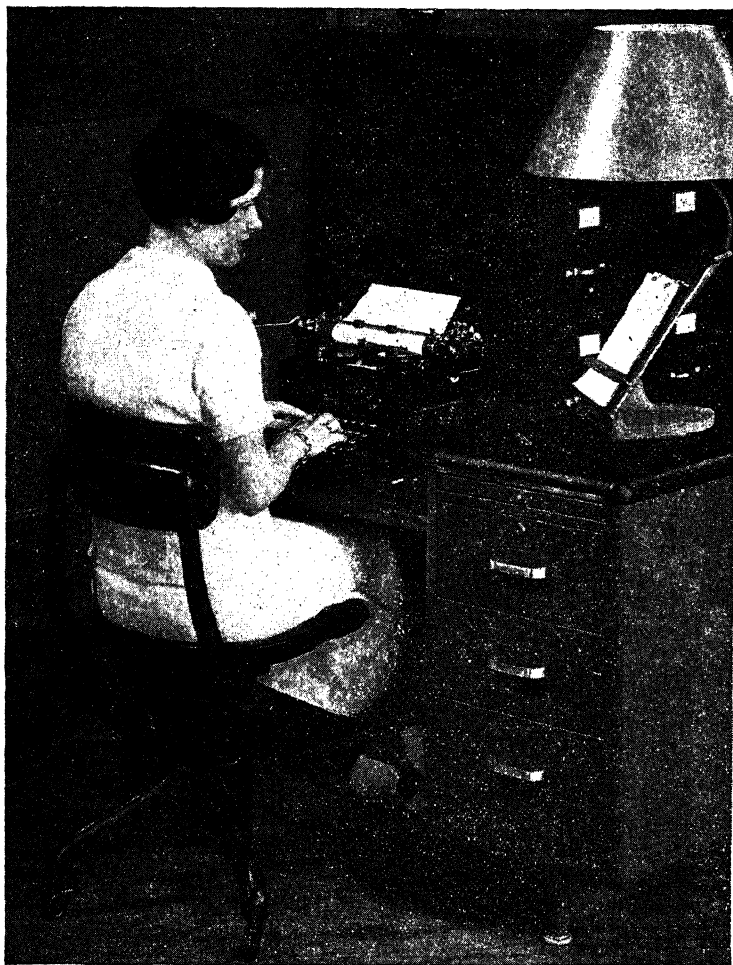


Fig. 22.—Stenographer's Chair. *Courtesy of Sikes Company.*

but it is often possible to file right at the counter papers or other records needed for use in talking with the customer or caller, thus saving the time which it would be necessary to take to go to some other part of the office to secure the paper, to return to the counter, and, after finishing the business at hand, to return the paper to the file.

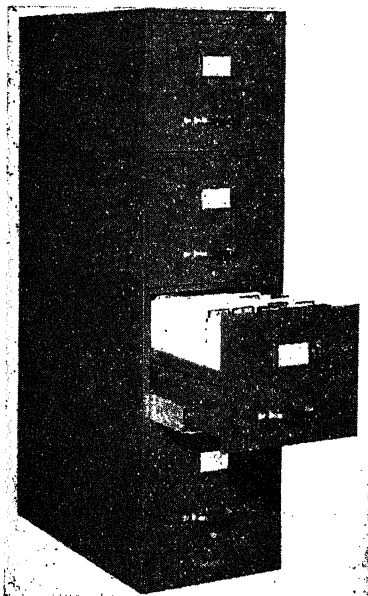


Fig. 23.—Standard Four-Drawer Vertical File. *Courtesy of Art Metal Construction Company.*

**Visible record-keeping equipment.** Visible record-keeping equipment is extensively used in offices. The fundamental principle upon which all such equipment works is the fact that, in one way or another, the name, title, or subject is made quickly visible. Visible equipment is of three general types: (1) the unit or panel type, in which the card or metal rack itself is removable; (2) the type which consists of a series of panels built horizontally into the outer unit so that, by pulling the panel out, the principal name or title

is quickly found (the holder in which the card is kept may then be raised, so that the entire card is visible); and (3) the revolving-rack type, similar to the first one mentioned, but used chiefly in cases where it is necessary for a considerable number of persons to use the rack at the same time. Credit cards used in retail stores, showing the names of customers who have a charge account, and the credit limit of each, are often placed on revolving racks of this kind. Each rack contains cards covering a section of the alphabet. In cases where the customer is waiting to take a package

with him, the sales check is sent by tube to the credit clerk, who can quickly check the credit by turning to the rack, authorize the charge, and return the sales check to the sales clerk.



Fig. 24.—Counter-Height File. *Courtesy of Art Metal*

**Limitations of visible equipment.** Visible filing equipment has certain principal limitations. (1) In some cases visible filing equipment is used for cards containing information that it is not necessary to refer to constantly or quickly. This type of equipment is somewhat more expen-



Fig. 25.—Use of Counter-Height Files in an Insurance Office. *Courtesy of Art Metal Construction Company.*

sive than vertical filing units. Hence, when one considers the number of cards that one unit will hold, it is apparent that unnecessarily high costs may be incurred by using visible equipment when non-visible equipment would serve the purpose equally well. (2) In an office where record-keeping equipment needs are growing rather rapidly, the installation of visible equipment may result in a rise in equipment costs which will become increasingly disproportionate in relation to the filing space that is appropriated as more units are added. (3) Ordinary vertical file cabinets are often used for the storage of miscellaneous booklets, leaflets, reports, and so on, as well as for filing papers

**Steel versus wooden equipment.** During the last ten years there has been a considerable increase in the amount of steel office equipment used. Steel files are now used almost exclusively in preference to wood. With the excep-

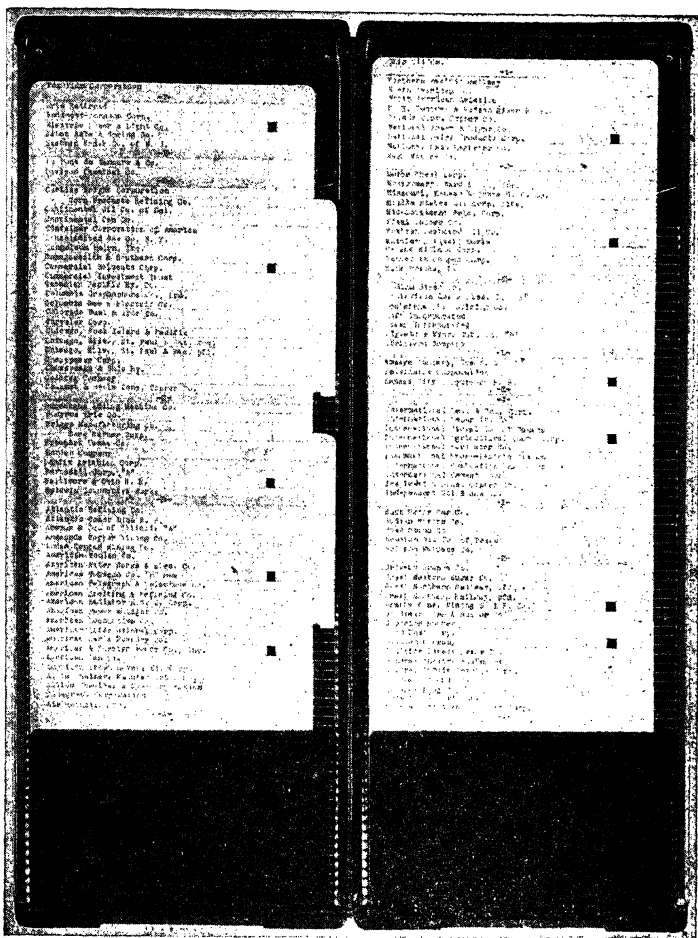


Fig. 26.—Flat Book Type Visible File. *Courtesy of Postindex Division, Art Metal Construction Company.*



tion of chairs, which, in the opinion of competent authorities, cannot properly be produced in steel, it is possible to equip an office entirely with steel equipment, including clerical and executive desks, tables, file cabinets, partitions, and bookcases. Many companies that formerly produced only wooden equipment have added steel to their line, while

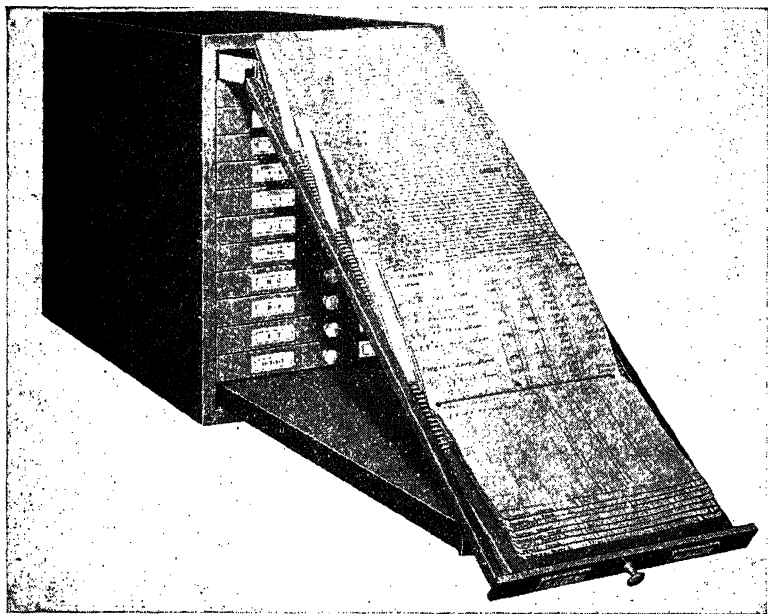


Fig. 27.—Drawer Type Visible File. *Courtesy of Postindex Division, Art Metal Construction Company.*

a number of other companies, such as the Art Metal Construction Company and the General Fireproofing Company, to mention only two, produce steel equipment only.

Among the advantages that steel equipment offers, under practical working conditions, are the following:

1. Steel resists fire much more readily than wood. It will not burn, nor will it fall apart if dropped from one floor to another.
2. Steel equipment costs about the same as wood, but

lasts indefinitely, thus reducing the amount of depreciation which it is necessary to charge off each year.

3. Because steel parts wear out more slowly than wood, and, in general, stand the wear and tear better, the mechanism of a steel cabinet is less likely to get out of order.

4. In a good many cases, which have come under observation, the bottom drawer of the filing cabinet is often

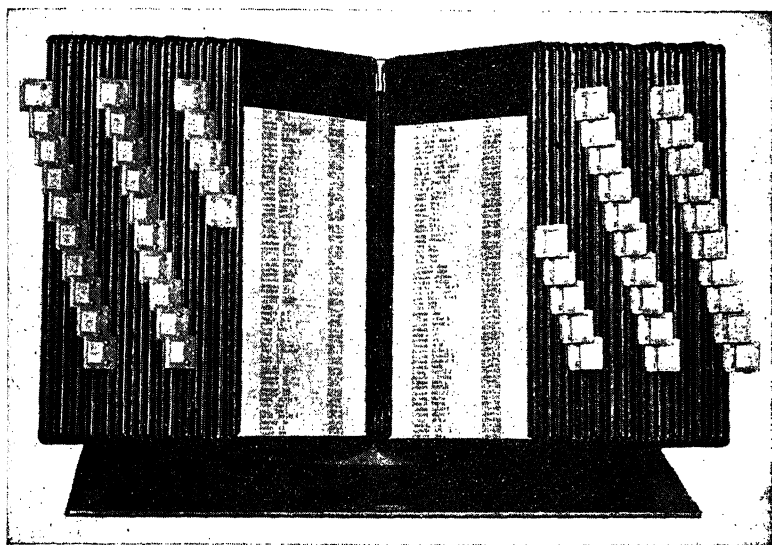


Fig. 28.—Swinging Panel Type Visible File. *Courtesy of Postindex Division, Art Metal Construction Company.*

used by the file clerk as a step to enable her to reach something on the top and at the back of the cabinet. Steel stands this practical kind of wear and tear better than wood.

Wooden files have one important advantage over steel files. In a burning building, the wooden exterior of the file cabinet may burn somewhat, but the papers inside will not be charred so quickly as they are likely to be in steel cabinets. This is due to the fact that wood burns slowly and does not transmit heat, while steel, although it does not burn, is a conductor of heat, with the result that, under

similar circumstances, papers may be charred more quickly in a steel cabinet than in a wooden one.

**Calculating machines.** In this group are included only those machines whose sole work is calculating of one kind or another. Machines which combine both writing and calculation, such as billing and bookkeeping machines, are included in this group.<sup>1</sup>

### Adding machines.

The simplest and best-known type of calculating machine is the adding machine. Adding machines may be classified as follows:

1. Non-listing
2. Listing
3. Full or standard keyboard
4. Ten-key
5. Hand-lever
6. Automatic electric

A number of machines offer combinations of the above types, some of the more common of which will be described presently.

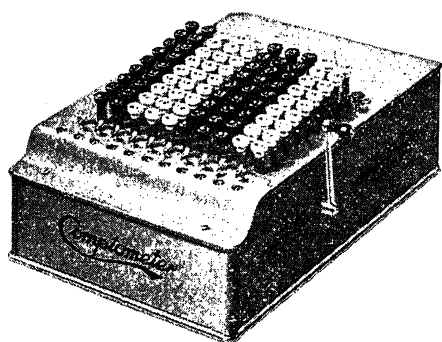


Fig. 29.—Non-Listing Type Adding Machine. Courtesy of Felt & Tarrant Manufacturing Company.

#### *The non-listing type.*

This is the simplest type of straight adding machine. Each digit is represented by a separate column. Models containing from seven to seventeen columns may be secured. When each key is depressed, counters in the machine are turned when the lever is pulled down, in the case of the hand-lever type, or are actuated by electric contact in the case of the automatic electric

type. The total accumulates at either the top or bottom of the

<sup>1</sup> The material in the rest of this chapter is adapted from MacDonald, J. H., "Office Appliances and Machines," *Handbook of Business Administration*, Donald, W. J., Editor-in-Chief, published for the American Management Association. McGraw-Hill Book Company, Inc., New York, 1931.

machine in the space provided. To clear the machine it is usually necessary simply to depress the total key, which automatically returns all figures in the total column to zero.

Advocates of the non-listing type of adding machine claim that an experienced operator can add a column of figures twice as fast as one person alone can both operate the machine and then check back the figures appearing on the listing tape against the original source. On the other hand, it is often desired to file the adding machine tape as a permanent record with the papers to which it relates.

*The listing type.* The principle of operation and use is the same in this type as in the non-listing type, except that each number is printed on a tape, together with sub and grand totals.

*The full or standard-keyboard type.* Every adding machine is of either the full-keyboard or the ten-keyboard type. The full-keyboard type contains as many rows of keys, each from one to nine inclusive, as the digit capacity of the machine. The chief advantage of this type is that it is simple to operate and easy to understand. This type is most frequently found in smaller offices where a number of people have occasion to use an adding machine, but where there is no high degree of specialization.

*The ten-key type.* In the ten-key type each key represents a digit, but the mechanism automatically takes care of the numerical or columnar order. While a number of straight adding machines of this type are available, the most frequent use of the ten-key mechanical principle is in combination with other appliances such as the billing machine, the bookkeeping machine, and so on.

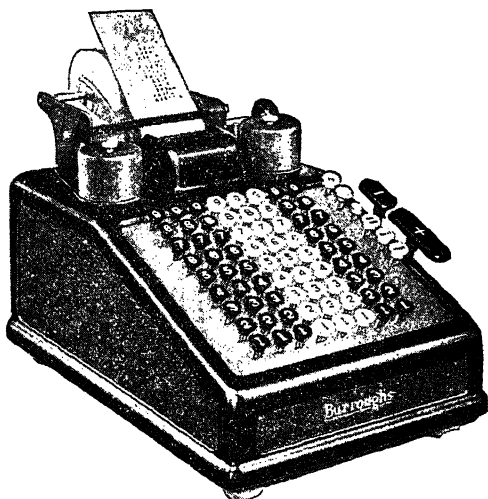


Fig. 30.—Listing Type Standard Keyboard Adding Machine. Courtesy of Burroughs Adding Machine Company.

*The hand-lever and automatic electric types.* Every adding machine is either of the hand-lever or automatic electric type. In the hand-lever type the lever is pulled down each time after the number is set up in the machine, while in the automatic electric type a slight touch of a bar actuates the mechanism. Obviously, the electric type requires less manual effort and less time. Consequently this type is most frequently used where a large volume of work and a high degree of specialization result in

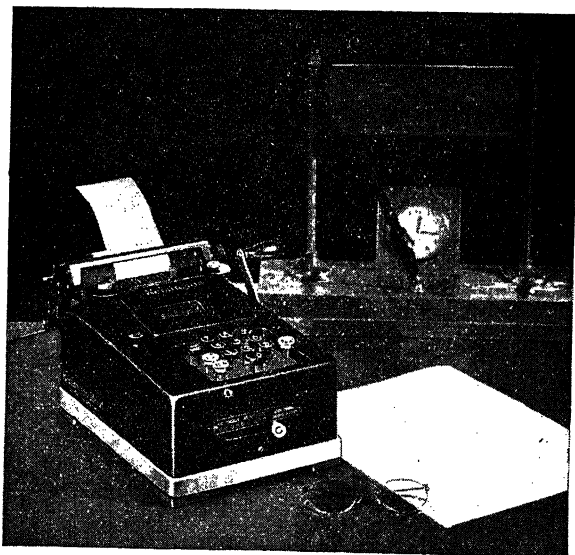


Fig. 31.—Ten-Key Type Adding Machine. *Courtesy of Remington Rand, Inc.*

the continual use of the machine by a single operator or a group of operators. The hand-lever type is much more frequently used in the smaller office.

*Combinations of various types.* For the sake of simplicity and clarity, each type has been discussed separately. It should be emphasized, however, that every machine is actually a combination of two or more of the types mentioned. Thus we find the list machine in either the hand-lever or the automatic electric type, the full-keyboard or ten-key machine in either the list or non-list type and with either hand-lever or electric motivation. The kind of work to be done, the volume of it, the degree of specialization, and the cost are the controlling factors in deciding which type and manufacturer's make is best suited

to a particular kind of work. Adding machines are one class of office equipment in which standardization is not necessarily the best practice—in fact, in many large companies one finds a number of makes of adding machines, each chosen because of its adaptability to the particular work of the department in question.

*Other calculations.* Adding machines may be and are widely used to perform many calculations other than straight addition. By the use of reciprocal numbers, and so forth, subtraction, multiplication, and division may be performed with as much ease, although not necessarily as quickly, as addition. Machines which subtract, multiply, and divide directly, as well as add, are also widely used. However, in considering the purchase of a calculating machine which is built specifically for subtraction, division, and multiplication, as well as for addition, the office manager should carefully consider the number of such calculations to be made and the time required to make them compared to the time required if a straight adding machine is used. To buy a direct subtraction machine or one which will multiply and divide automatically simply because there are such operations to be performed in the office may be unwise, unnecessary, and expensive.

*Uses.* The field of calculating machines is so broad and well known that there is no need to cite examples. Wherever the volume of work and the degree of specialization warrants their use, calculating machines perform an indispensable service. Railroads, banks, public utilities, stores, and manufacturing plants all find innumerable uses for such machines in their billing, bookkeeping, cost accounting, engineering and sales departments. In recent years there has been an increasing tendency to combine the calculating-machine function with others such as bookkeeping, general accounting, cost accounting, analytical work, and so on, in which the results of the calculations appear

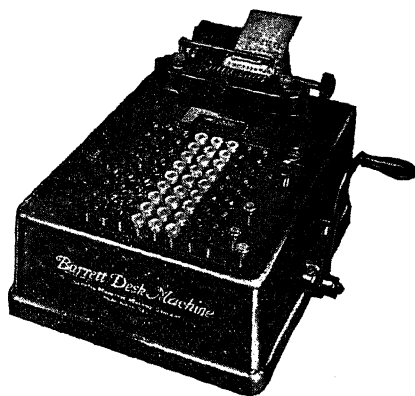


Fig. 32.—Hand-Lever Type Adding Machine. Courtesy of Lanston Monotype Machine Company.

in written form on permanent records such as bills, journals, customers' accounts, sales analysis sheets, cost sheets, and so on. Consequently, it is important to bear in mind, if one is considering the purchase of such a machine, that such combinations as have just been suggested apparently represent the trend in this field. With the tendency very distinctly towards the greater use

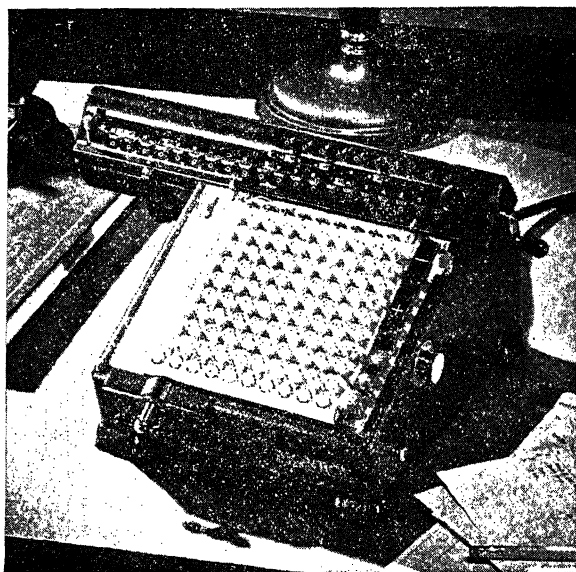


Fig. 33.—Automatic Electric Calculating Machine. *Courtesy of Monroe Calculating Machine Company.*

of machinery in office work, it is not unnatural to find such combinations developing and to expect that they will continue to develop to a still greater degree as time goes on.

### Billing machines.

The modern billing machine is a combination typewriter and calculating machine. It is possible, through the proper collation of forms, to make additional copies for other purposes such as the packing slip, the shipping copy, the manufacturing department copy, the express receipt, and so on. Furthermore, sales distribution by various product classifications, account analysis by customers, and similar distribution or analytical work often can be performed at one writing.

*Available types of billing machines.* Billing machines may be classified as follows:

The cylinder type, in which the forms are fed around a cylinder in the same way that a letterhead, carbon paper, and second sheet are inserted and turned in an ordinary typewriter.

The flat-bed type, in which the forms are contained in a bed over which the writing unit moves.

Machines that do not compute but merely type.

Machines that type, add, and subtract.

Machines that type, add, subtract, multiply, and divide.

Machines that use cut forms.

Machines that use continuous-length forms.

As in the case of calculating machines, each machine is actually a combination of two or more of these various types, such as flat-bed machines that type, do all calculations, and use continuous length forms; cylinder-type machines that only type, add, and subtract, and use cut forms; and so on. The cylinder type that merely writes, does no calculation of any sort, and uses only cut forms is fundamentally simply a typewriter with the stops adjusted to correspond to the width of the various columns on the form. On the other hand, the type of billing machine which writes, does all four kinds of calculations, including analytical and classification work, and can be arranged for writing many forms at one time, is a machine which combines many operations in one. Most types of billing machines are available in both the cylinder and flat-bed models.

*Advantages of using billing machines.* There are numerous advantages in using billing machines, particularly those types which combine typewriting with at least addition and subtraction, if not multiplication and division. In the first place, the machine is both a typewriter and a calculating machine, as it is



Fig. 34.—Cylinder Type Typewriter-Billing Machine. Courtesy of the Adding Machine Co.



possible to use each mechanism separately. Second, by the proper collation of forms, as many as eighteen copies may be made at one writing, thus saving much subsequent rewriting and copying, which it is necessary to do if hand methods or typewriters are used for preparing bills. Third, calculations are known to be correct because they are mechanically performed. Billing machines have automatic devices that lock the machine when an error in posting has been made. Fourth, various distribu-

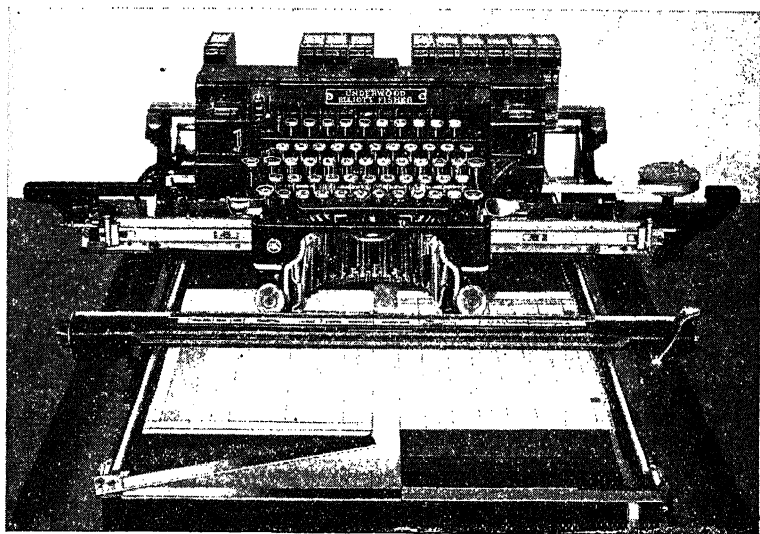


Fig. 35.—Flat-Bed Type Bookkeeping Machine. *Courtesy of Underwood Elliott Fisher Machine Company.*

tions may be made, at the same time that the bill is being written, by means of totalizers or registers, which accumulate vertical totals by columns in addition to the cross computers.

Department stores, public utilities, manufacturing companies, both large and small, wholesale concerns, and railroads use billing machines to great advantage. Instead of the old method, under which everybody who could operate a typewriter worked on the bills at the end of the month and subsequent entries to other accounts, as well as statistical records, were long delayed, the billing machine not only keeps work up to date, but writes many other records at the same time and with greater speed and accuracy.

## Bookkeeping machines.

In discussing bookkeeping machines, care must be taken to distinguish between those machines in which the fundamental characteristic is the use of ledger sheets of various kinds and those that some manufacturers have termed "electric accounting," or machines in which punch cards take the place of ledger sheets. For the purpose of this discussion, we shall refer, under the classification of bookkeeping machines, to those machines in which a ledger card or sheet of some kind is used, leaving for the following section, "Electric accounting and tabulating machines," those machines which use punch cards as a basis for bookkeeping work.

*Fundamental characteristics and principles of operation of bookkeeping machines.* Bookkeeping machines are not unlike billing machines in that, with the exception of the bookkeeping machine of cash-register origin, they are really a combination of a typewriter and a calculating machine. In fact, a number of machines which are sold for billing work and also as bookkeeping machines can be used, with slight changes, for both billing and bookkeeping work. Again, as in the case of billing machines, a fundamental principle of bookkeeping machine operation is the writing of a number of records or forms at once, thus eliminating the copying necessary with hand work and also insuring accuracy of posting through mechanical calculation and devices which lock the machine when an error has been made.

*Various uses.* Among the records for which bookkeeping machines may be used are the following:

Purchase journal	Accounts payable ledger
Distribution journal	Remittance advice
Sales journal	Proof journal
Cost of sales journal	Cost sheets
Cash received journal	Stores records
General journal	Inventory records
Accounts receivable journal	Pay roll records
Customers' statements	

In using a bookkeeping machine for accounts receivable work, for example, the accounts receivable ledger is posted, the customer's statement prepared, and a proof journal made, all at the same time. The proof journal, obtained as a by-product of the posting of all accounts, provides a complete permanent record and proof of all items posted. Charges, credits, and

balances are automatically accumulated for proof, and the totals are printed in the proper columns on the proof journal. Credit balances are automatically printed in red figures on original forms and also marked with a symbol "CR" which shows on all copies.

Purchase and payment records are handled in the same manner as accounts receivable. If an accounts payable ledger is maintained (providing a permanent record of purchases against which vendors' statements may be checked to prevent duplica-

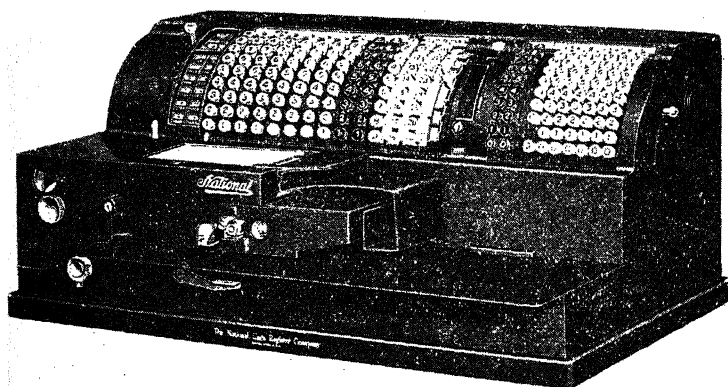


Fig. 36.—Cash-Register Type Bookkeeping Machine. *Courtesy of National Cash Register Company.*

tion of payments), a remittance advice may be prepared as each accounts payable ledger account is posted. Transactions and journal totals which affect the asset; liability, revenue, and expense accounts in the general ledger may be posted daily, if desired. Thus financial statements may be compiled quickly and accurately, because all accounts will be posted and proved to date. Bookkeeping machines are also extensively used for posting stock records, where it is desired to keep a record of quantities and values, both by units and totals. The machine extends a new balance of both quantity and value with each posting, thus affording a perpetual inventory. Most machines automatically accumulate the total quantity and total value of all items posted, which provides proof that all items have been posted, and none posted twice.

*Bookkeeping machines of cash-register origin.* The bookkeeping machine of cash-register origin differs from other

bookkeeping machines both in appearance and in operation. Instead of the usual typewriter cylinder or flat-bed type with the writing unit above, this machine consists of a bank of keys very similar in appearance to a cash register. One set of keys is for debits, another for credits, the rest for balance, total, subtotal, error, and so on. In place of the cash drawer, however, there are two horizontal writing surfaces, one having place for the insertion of a card or cards for posting and the other containing a continuous roll or audit sheet on which are automatically posted all entries made by the machine.

In using the machine for accounts receivable work, for example, the old balance as shown on the customer's ledger card is picked up, as is the case with other bookkeeping machines. Both card and statement are then inserted in the machine; the amount to be posted is set up by depressing the proper keys, and the machine is operated. As the figures are printed on the ledger card and statement, they are also printed on the audit sheet, thus giving an itemized journal or record of all transactions passing through the machine. The balance is then secured by depressing the balance key, which automatically adds or subtracts from the previous balance. The new balance is then printed on the ledger card and customer's statement.

Where installment sales and payments are handled, this machine is particularly useful, especially if the customer has a payment book of some sort which he keeps, as is usually the case. In this case the ledger card and the book are inserted in the machine together, the amount of payment is recorded, and the book is returned to the customer and the ledger account to the file. Machines of this type are widely used by savings banks, building-loan associations, hotels, personal loan companies, retail stores, and many other lines of business in which periodic payments may be made by check, by mail, or in cash.

*Advantages of bookkeeping machines.* In addition to the usual advantages which the use of office machinery yields, bookkeeping machines have made one outstanding contribution to modern accounting and office management—namely, the virtual elimination of tedious hours of overtime at the end of the month and year on the part of bookkeepers and clerks. Bookkeeping machines make it possible to keep all accounts posted up to date and constantly in balance, which in turn enables the preparation of statements whenever they are needed. This kind of day-to-day control alone, to say nothing of greater accuracy, speed, and better appearance, more than justifies the increasingly wide use being made of bookkeeping machines.

### Electric accounting and tabulating machines.

During the last few years an increasingly large number of business organizations have come to realize the fact that good management and control must first of all be based on facts and figures. Subdivision of accounts, detailed analyses of sales and manufacturing expenses, and the breaking down of items formerly available only in total are only a few of the many steps being taken along these lines. To get the facts easily, promptly, and economically, however, necessitates the use of machines. The manufacturers of tabulating equipment have not been slow to recognize these new demands and to prepare themselves for them.

Tabulating equipment is of two distinct types. First and perhaps best known are the machines that use so-called punch cards or tabulating cards. Second, there is a machine, again of cash-register origin, as is the bookkeeping machine just described, in which banks of keys similar in appearance to cash-register keys are depressed and printed results are obtained.

*Uses of the equipment.* Both types of equipment are used for two distinct purposes, namely, outright statistical and analytical work, and general- and cost-accounting work. Analyses and classifications of sales by salesmen, by price lines, by territories, by classes of product, by profit lines, and by kind of business sold constitute some of the uses to which such equipment frequently is put in the sales field. Large department stores use such equipment extensively for such work as inventory analysis and classification, as well as for charge-account analysis to determine the number of charge customers who bought in five departments only, in six to ten departments, in eleven to fifteen departments, and so on, and what they spent per month or six months, and so on. Life insurance companies have a wide variety of uses for such equipment for purely statistical purposes.

Considerable use of tabulating equipment also is made in the fields of general and cost accounting. In many companies, for example, a set of tabulating cards comprises the accounts receivable ledger. A card may be kept for each customer containing, for example, the sales order number, invoice number, date of sale, kind of product sold, amount of the sale, date paid, discount taken if any, open balance, and so on. Accounts payable records are kept in the same way. Stock records, pay rolls, and general expense accounts are similarly handled. In the field of cost accounting, tabulating cards showing the amount

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SALES ANALYSIS

DATE	INVOICE NUMBER	CUSTOMER'S NAME	LOCATION		BRAND		QUAN- TITY	UNIT PRICE	COST	SALES AMOUNT	FREIGHT AMOUNT
			ST.	CO. CITY	NAME	NO.					
00	0000	00000000000000000000	00	000	00000000	00	0000	0000	0000	0000	0000
00	0000	00000000000000000000	00	000	00000000	00	0000	0000	0000	0000	0000
11	1111	11111111111111111111	11	11111	11111111	11	1111	1111	1111	1111	1111
11	1111	11111111111111111111	11	11111	11111111	11	1111	1111	1111	1111	1111
22	2222	22222222222222222222	22	22222	22222222	22	2222	2222	2222	2222	2222
22	2222	22222222222222222222	22	22222	22222222	22	2222	2222	2222	2222	2222
33	3333	33333333333333333333	33	33333	33333333	33	3333	3333	3333	3333	3333
33	3333	33333333333333333333	33	33333	33333333	33	3333	3333	3333	3333	3333
44	4444	44444444444444444444	44	44444	44444444	44	4444	4444	4444	4444	4444
44	4444	44444444444444444444	44	44444	44444444	44	4444	4444	4444	4444	4444
55	5555	55555555555555555555	55	55555	55555555	55	5555	5555	5555	5555	5555
55	5555	55555555555555555555	55	55555	55555555	55	5555	5555	5555	5555	5555
66	6666	66666666666666666666	66	66666	66666666	66	6666	6666	6666	6666	6666
66	6666	66666666666666666666	66	66666	66666666	66	6666	6666	6666	6666	6666
77	7777	77777777777777777777	77	77777	77777777	77	7777	7777	7777	7777	7777
77	7777	77777777777777777777	77	77777	77777777	77	7777	7777	7777	7777	7777
88	8888	88888888888888888888	88	88888	88888888	88	8888	8888	8888	8888	8888
88	8888	88888888888888888888	88	88888	88888888	88	8888	8888	8888	8888	8888
99	9999	99999999999999999999	99	99999	99999999	99	9999	9999	9999	9999	9999
99	9999	99999999999999999999	99	99999	99999999	99	9999	9999	9999	9999	9999
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

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Fig. 37.—Tabulating Card. Courtesy of International Business Machines Corporation.

and value of direct labor and direct material used on each job or lot, the burden applicable to the job, the total manufacturing cost, and so on, have replaced cost sheets in many cases, or at least they supply the details. Labor and material tickets may be handled in a similar way. It is because of this development in the use of tabulating equipment, wherein manufacturer and user alike have gone far beyond the original idea of using such equipment only for statistical and analytical work, that electrical accounting and tabulating are discussed together.

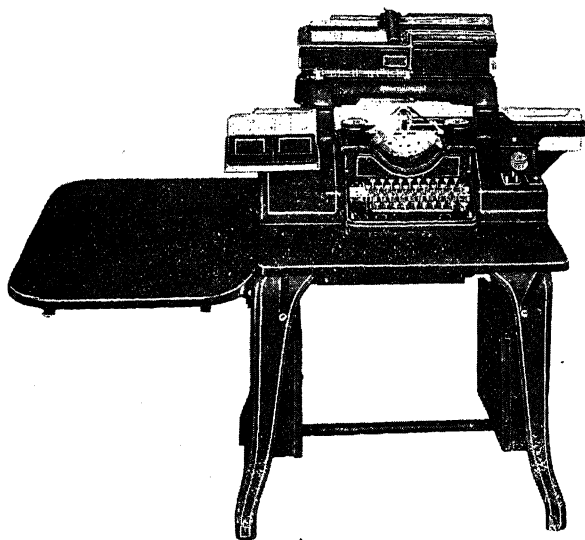


Fig. 38.—Key Punch. *Courtesy of International Business Machines Corporation.*

*Operating principles of tabulating equipment using punch cards.* Tabulating equipment using punch cards consists of three separate machines: (1) the key punch, either electrically or hand operated, which punches the holes in the tabulating cards; (2) the sorter, which sorts the cards passed through it into various groups as desired; and (3) the tabulator, which calculates, records, and may also print the results.

The principle of the tabulating or punch card is simple. The card itself is divided into various so-called fields, in each of which there are vertical columns of figures numbered from zero to nine. The figures applicable to each field are recorded by punching out holes in the appropriate columns. For example,

in the case of stock records, the quantity received, the quantity issued, the balance on hand, together with the values and dates in each case, the invoice number on which the material was purchased, the date the order was placed, the production order, the sales order, or the material requisition number are indicated by punches in the proper holes. If desired, the key punch may be connected with a standard typewriter or posting machine so that a bill or other typewritten record may be made at the same time that the card is being punched.

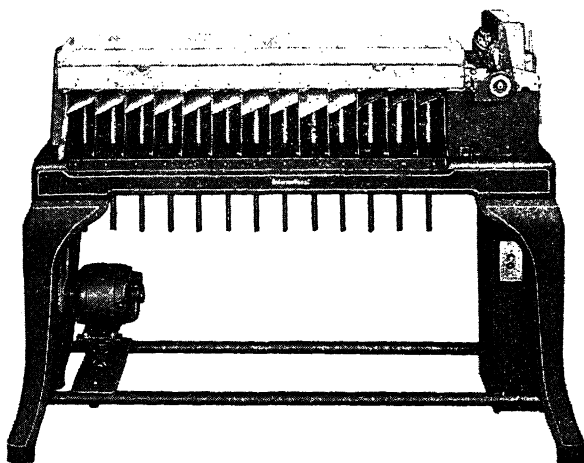


Fig. 39.—Sorter. *Courtesy of International Business Machines Corporation*

The purpose of the sorter is to select or sort automatically all cards in which a particular hole number has been punched. Only one column can be sorted at a time. The cards are passed through the machine, and those having holes punched in the column for which the selector has been set are automatically dropped into the containers or trays provided, the balance of the cards accumulating at one end of the machine. While it is frequently necessary to pass the same cards through the machine several times in order to secure all the desired classifications, due to the fact that the machine will select only one column at a time, this is not a serious drawback, as the machine can sort at the rate of 400 or more cards per minute.

After the cards are sorted as desired, they are passed through the tabulating machine and subtotals and totals are secured, either from the dials or from the tape on which the figures may be printed.



*Advantages and disadvantages.* The outstanding advantage of the tabulating card system is that information can be analyzed and rearranged in numberless different ways automatically and speedily without the necessity of rewriting, rearranging, and reclassifying. Economy of space is also an important item. For a business which has enough transactions or postings to keep the equipment reasonably busy, information of many kinds, or the same information classified in many ways, can be secured most easily and economically. On the other hand, there are

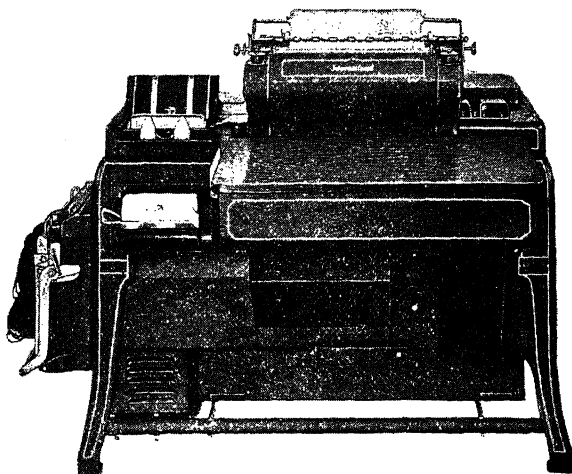


Fig. 40.—Tabulator. *Courtesy of International Business Machines Corporation.*

some cases in which an installation of such equipment should never have been made because the various analyses which can be made from the cards are either never made at all or are not used by the executives for whom they are prepared. The fact that one can secure all manner of classifications from a single card seems to have an appeal to many executives who do not stop to think, when considering the rental of the equipment, just how much use they are actually going to make of the information after it has been presented to them.

*Tabulating machines of cash-register origin.* These machines, sometimes called machines of the ticket-producing type, have a keyboard very similar in appearance to that of a large cash register. The principal difference between this type of machine and the bookkeeping machines described in a previous section is that they do not have descriptive writing units, but

are equipped with a number printer which prints descriptive numbers or symbols, which must be used to identify each transaction. When a certain key is locked, the accounting or posting machine can also be used as an analysis machine.

A total of twenty-seven different classifications can be secured, each with subtotal and grand total. The large number of totals with which these machines are provided eliminates the necessity of hand sorting the records from which the information is taken. The machine is electrically driven; no manual work other than

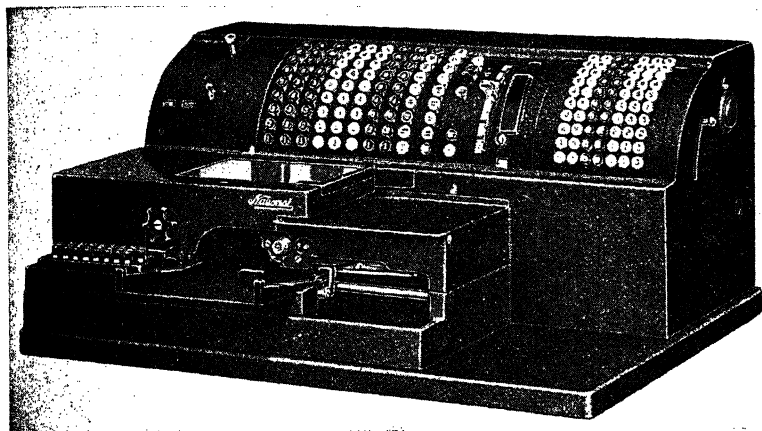


Fig. 41.—Tabulating and Analysis Machine of Cash-Register Origin. *Courtesy of National Cash Register Company.*

that of depressing the keys being necessary. At the base of the keyboard an audit-sheet continuous-roll form is provided. This contains a detailed record of each transaction, enabling the operator to verify at sight the correctness of the previous thirty-four transactions. A series number is also automatically printed on this audit sheet, so that any item can be traced and the total number of transactions handled can be easily ascertained.

Machines of this type have found wide use where the total number of classifications needed in any one analysis does not exceed twenty-seven. Study of a particular situation frequently shows that while a considerably larger number of classifications may be thought necessary at first, a large per cent of the total items to be handled are in very few groups, often much less than twenty-seven in number.

The obvious advantage of this type of machine, as contrasted

with tabulating-card equipment for analysis work, is that only one operator and one machine are necessary. On the other hand, equipment of this kind is not as flexible and furnishes no permanent record of the operation comparable with the completed punched tabulating card, other than that made on the continuous-roll audit sheet.

### Cash registers and coin-handling devices.

Cash registers are made in both print and non-print models and are operated either by keys or by levers. The print type may be secured in any one of four models.

*The total printer.* This type provides a total record, which may be printed at any time upon a slip of paper. In addition to the total of sales, there are printed on the slip the date, the number of transactions, the number of times the "no-sale" key was used, the number of times the adding and counting mechanism was reset to zero, and the number of the machine. At the end of the day the printed slip may be filed as a permanent record of the day's business.

*The detail printer.* The detail strip shows the amount of sale of each item, the nature of the transaction, and the salesperson's initial or department symbol. The register of this kind is equipped with one or two total-adding counters, which print the total of the accumulated amount.

*The detail and receipt printer.* The detail and receipt printer has the same characteristics and features as the detail printer, but has in addition the receipt-printer, which issues a ticket or receipt to each customer. The receipt bears the total of the sale, the transaction number, and the date of sale. The detail and receipt-printing type of cash register is operated by motor or hand power after the amount keys are depressed.

*The detail-total printer.* The register of this kind prints and adds the items of sale, then prints and records the total. This register retains a detailed record and issues a receipt giving the itemized sales and the total.

*Coin-handling machines.* Coin-handling machines are of two principal types—coin-changing devices, and machines especially built to handle change in bulk.

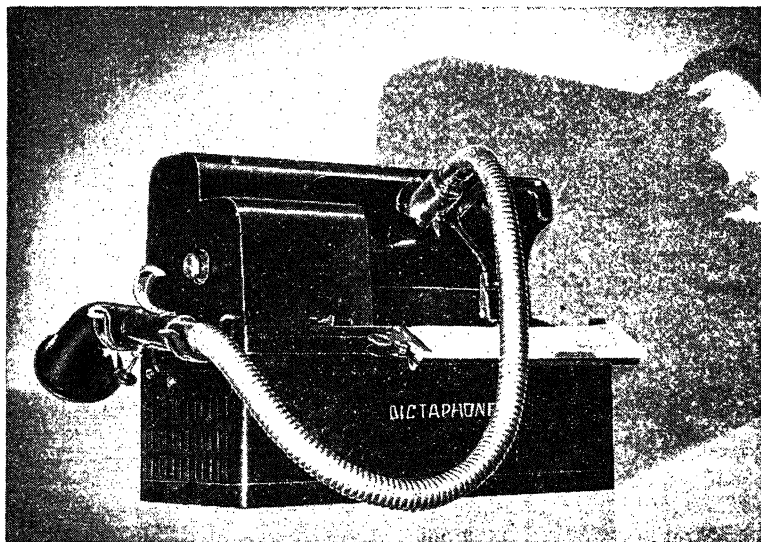
*Coin-changing machines.* The coin-changing machine consists of three main parts: (1) the coin tray, or slots at the top of the machine in which the various denominations of change are kept; (2) the keyboard, consisting of keys, one row for each unit, which when depressed release the desired number of coins; and (3) the coin chute, the channel through which the coins

fall. The type of keyboard is the distinguishing characteristic of the two types of machines available. In one type the machine delivers the amount indicated by the key depressed—17, 42, 59 cents, and so on—while in the changer type the machine computes and delivers the difference between the amount shown on the key which is depressed and one dollar. For example, the 17-cent key delivers not 17 cents but 83 cents.

*Coin-handling devices.* Coin-handling devices are of three kinds: (1) coin separators, or machines which simply sort mixed change; (2) coin-counting and packing machines, which count and wrap coins from 1 to 50 cents, one denomination at a time; and (3) coin separators and counters, which separate, count, and wrap all in one operation. Tokens may also be handled in the same way. Many separators utilize centrifugal force to throw the coins from a revolving disc into various-sized slots as the disc turns. Others work on what is essentially the sieve principle. Machines are driven either by hand or by electricity. Some machines pack the counted coins in paper wrappers or tubes, while others load them in bags.

### Dictating machines.

The dictating-machine system, by means of which the voice is recorded on a wax cylinder and later transmitted back to the



42.—Dictating Machine. *Courtesy of the Dictaphone Corporation.*

typist, consists of three separate machines: the dictator or dictating machine, the transcriber, and the shaver. The dictator or correspondent uses only the dictating machine, the typists use only the transcriber, while the office boy usually presides over the shaver.

*The dictating machine.* By means of the dictating machine the voice is recorded on a wax cylinder placed upon a flexible



Fig. 43.—Dictating Machine Wax Cylinder. Courtesy of the Dictaphone Corporation.

mandrel, or cylindrical spindle, which is rotated by a small electric motor. The vibrations of the dictator's voice are recorded by the process of engraving on the wax surface of the cylinder.

The machine is small and occupies little space, so that it may be placed on the dictator's desk or on a stand at the side of his desk. If the dictator is interrupted, or if for other reasons he wishes to have repeated what he has just dictated, he may listen to his own words by throwing a lever from the dictating position to the reproducing position.

*The transcribing machine.* Although similar to the dictating machine in appearance and identical in fundamental construction, the transcribing machine is entirely different in function. It reproduces word for word what has been dictated upon a cylinder.

The machine is operated by the typist, who places the re-

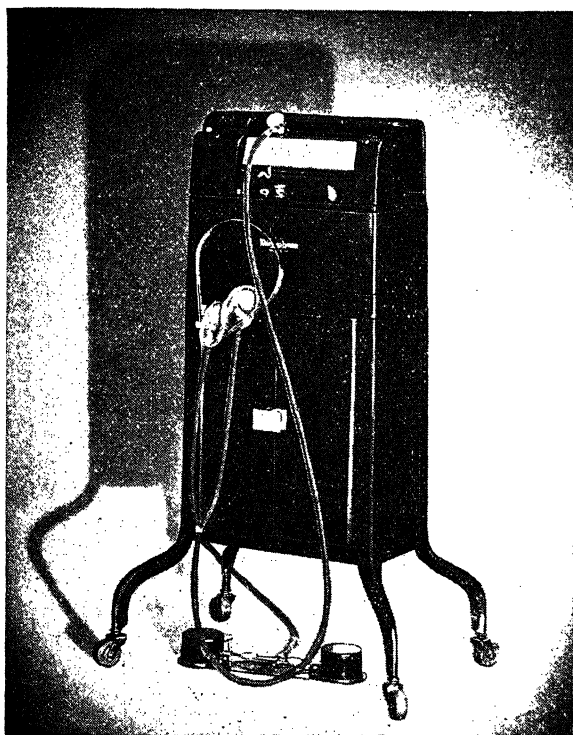


Fig. 44.—Transcribing Machine. Courtesy of the Dictaphone Corporation.

ceivers on her ears, touches the control device, and listens to a number of words. She has complete control of the machine and may cut off the dictation while typewriting the words she has heard. Any word or phrase that the operator does not catch the first time may be repeated as often as necessary.

*The shaving machine.* This machine operates upon the same principle as a lathe. A cylinder is placed upon the mandrel and the knife is adjusted to shave off the engraved surface. As

the knife moves along the cylinder, it shaves off a very fine layer of the wax, thereby making the surface of the cylinder perfectly smooth so that it can be used again for dictation. Each cylinder may be used over and over again, often as many as one hundred times.

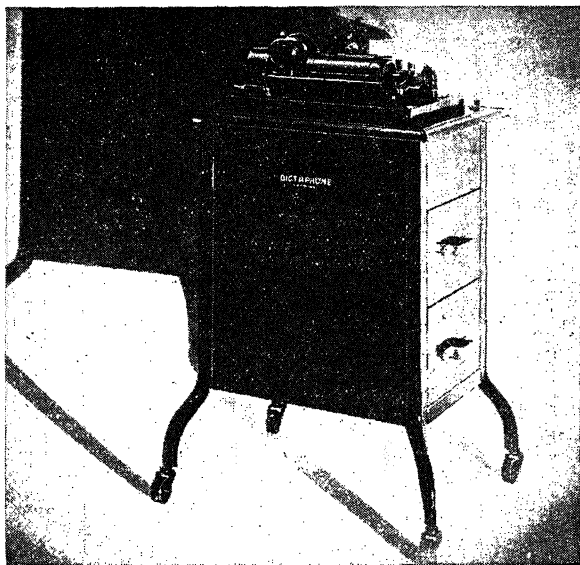


Fig. 45.—Shaving Machine. *Courtesy of the Dictaphone Corporation.*

*Uses and advantages of the dictating-machine system.* Unlike many other office machines, the dictating machine can be used in any kind of business, of any size, and in any department. While the more usual applications are found in the handling of office correspondence, there are many other uses which can as easily be made of it. For example, the Irving Trust Company, of New York City, installed a dictating machine in the automobile used by representatives of the bond and mortgage department. It is the duty of these men to go about inspecting properties on which the bank has made loans. Instead of making notes after he finishes an inspection or trying to remember all the details until the end of the day, the inspector simply dictates his reports to the machine while being driven from one location to the next. When he returns the cylinders are given to a transcriber, and the typewritten reports are ready for signature at the end of the following day.

Considerable use is made of the dictating machine in recording important telephone conversations. Instead of trying to remember all of the details of business transactions arranged over the telephone, the executive can dictate to the machine at the same time that he is talking over the telephone, or immediately thereafter. The cylinder is transcribed later.

### Typewriters.

Perhaps it may seem unnecessary even to mention typewriters in this discussion. Certainly everyone knows what they are and what they do. The standard typewriter, the noiseless, the



Fig. 46.—Standard Typewriter. *Courtesy of Royal Typewriter Company.*

portable, and the electric are all familiar. Combinations of the typewriter with calculating machines, in the form of book-keeping, accounting, and billing machines, have already been mentioned. The use of the electric-typewriter principle in conjunction with the writing of form letters on a duplicating machine will be discussed presently under the heading of "Duplicating machines." The use of the typewriter in conjunction with telephone correspondence dictation has received considerable publicity recently. The connection of typewriters with long-distance telephone wires, for the rapid transmission of orders, messages, and so on, between offices located in distant cities, mentioned in a previous chapter, is merely another adaptation of the same fundamental mechanism. Of all office machines,



the typewriter is without doubt the most extensively used. It was the forerunner of most of the other office machines, which in turn are now in wide use themselves, and it seems destined to continue in predominating leadership indefinitely.

### Duplicating machines.

The typewriter, just discussed, is of course a form of duplicating machine. Similarly, addressing machines, which are taken up in the following section, may be classified as duplicating equipment. For our purpose, however, we shall define duplicat-

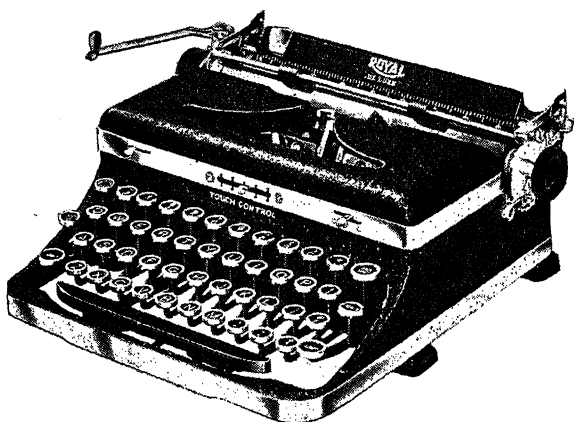


Fig. 47.—Portable Typewriter. *Courtesy of Royal Typewriter Company.*

ing machines as machines whose function it is to reproduce exact copies of printed, typewritten, or handwritten matter for any purpose. This definition therefore includes the reproduction of such things as notices, letters, bulletins, reports, charts and graphs, maps and drawings, and so forth.

*Kinds of duplicating processes.* Five processes of making multiple copies are used—stencils, gelatin, typesetting, automatic typewriter, and photographic.

*Stencil duplicators.* Exact reproductions of typewritten work, as well as of maps and charts—in fact, any kind of drawings or illustrations—can be had with stencil duplicators. The stencil is placed in a typewriter from which the ribbon has been removed, so that the letters are cut instead of being printed, thus exposing the fibers through which the ink can pass when the stencil is placed on the machine. By means of a stylus, illus-

trations and drawings and handwritten matter also may be stenciled.

The duplicator embodies a hollow, perforated, revolving cylinder partially covered with an ink pad. The ink is applied to the inner surface of the cylinder and passes through the perforations to the pad and openings of the stencil.

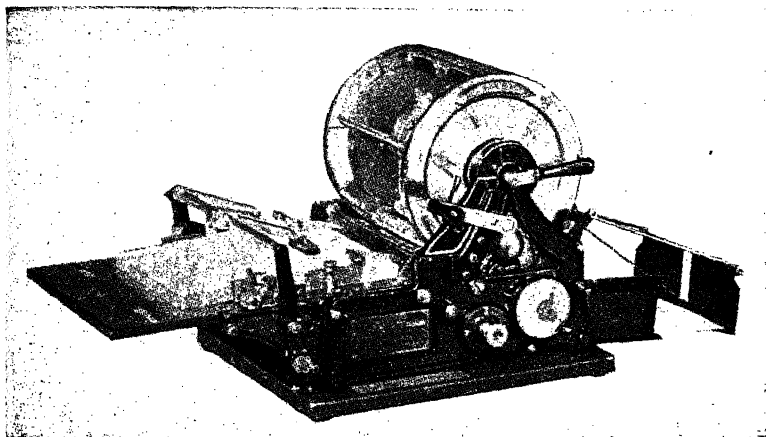


Fig. 48.—Stencil Duplicator (Mimeograph).

To make copies, the stencil is fastened to the cylinder over the ink pad. A turn of the handle causes the cylinder to revolve, thus bringing the stencil in contact, under light pressure with the paper that has been fed to the machine. The ink, by capillary action, passes through the letters or designs cut in the stencil to the paper, making an impression. Removable cylinders, allowing for the substitution of another when it is desired to reproduce two colors, are also available. One type of machine is equipped with automatic feeding devices which bring a sheet of paper to the cylinder with each turn of the crank; others are fed by hand. With the automatic duplicator, from 1500 to 5000 copies can be made in an hour.

*Gelatin duplicators.* This class of duplicators makes copies by transferring the ink from a typewritten, handwritten, or drawn original to a duplicating composition which dissolves and holds the ink on its surface until all the copies have been run off.

When preparing the original, hard bond paper and a special kind of ink are used. This may be in the form of a duplicating

typewriter ribbon, a duplicating ink, or even an indelible pencil. Different colors may be combined on one original.

This type of duplicator consists of a flat printing bed over which is stretched a gelatin-covered roll. After one surface of the roll has been used, a fresh one may be brought into position by the turn of a handle.

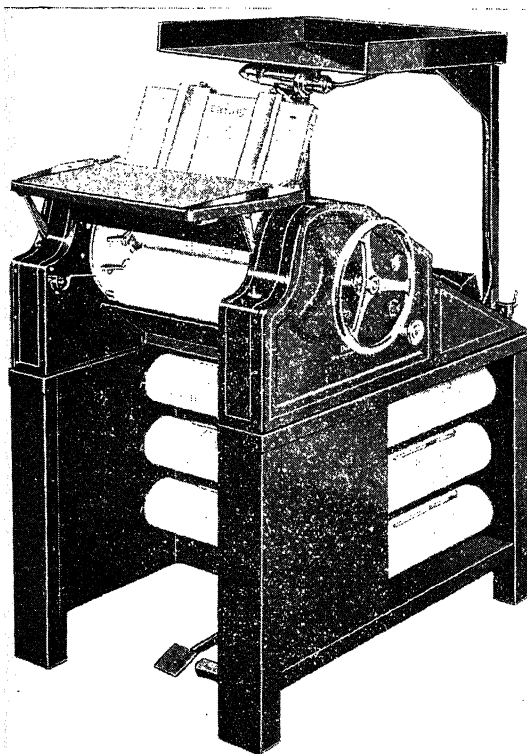


Fig. 49.—Gelatin Duplicator. *Courtesy of Ditto, Incorporated.*

The original is placed face down on the copying surface and smoothed with the palm of the hand or a roller provided for that purpose. It is then lifted off, having left its impression on the gelatin. The blank sheets are placed one at a time on the gelatin surface and allowed to remain a few seconds until the imprint is made.

*Other duplicators.* Modern duplicating machines are of two kinds. One of these prints either from composed typewriter

styles of type through a ribbon, or directly with ink from display type, electrotypes, or rubber printing plates. The other kind uses the offset principle, in which a planographic surface is prepared with the image to be duplicated, and the image is offset onto a rubber blanket and thence onto the surface of the paper.

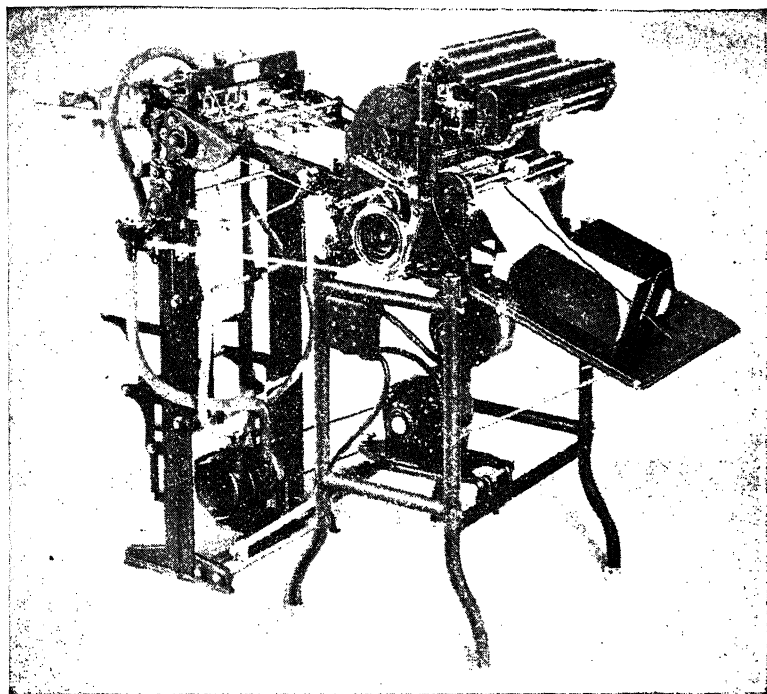


Fig. 50.—Multigraph Duplicator. *Courtesy of Addressograph-Multigraph Corporation.*

For relief duplicating, the typewriter styles of type for ribbon duplicating are composed by keyboard-operated machines which operate at usual typing speed, or by hand methods in the case of printers' faces and display type for ink duplicating. In either instance, type is composed directly onto railed segments. The composed segment is then placed on the duplicating machine, a wide typewriter style of ribbon is wrapped around the form for ribbon work, or ink is applied by an inking mechanism in the case of direct ink duplicating. As the printing drum of the machine revolves, paper is fed between the ribbon-covered

type or the directly inked type and a rubber-covered platen, thus producing a facsimile typewritten letter or an ink-duplicated form at each revolution. From 2500 to 5000 copies

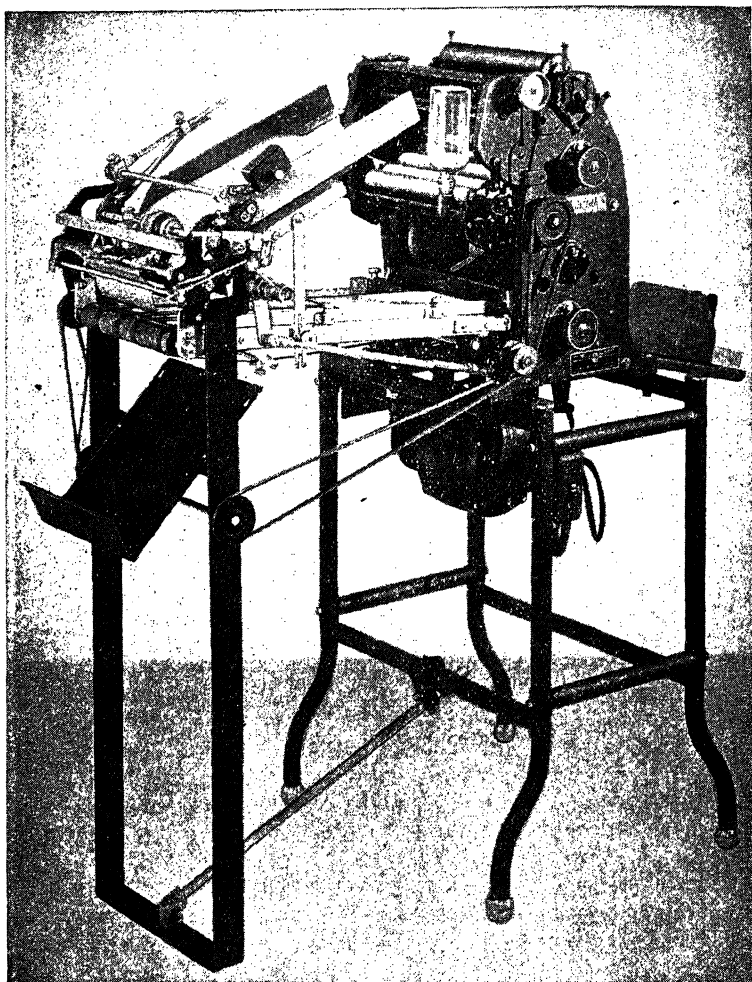


Fig. 51.—Multilith. *Courtesy of Addressograph-Multigraph Corporation.*

can be produced in one hour. Facsimile typewritten letters may be personalized on a typewriter, using a matching ribbon, or may be filled in on an addressing machine. Optional features include a facsimile ink print signature device, a perforator, and

a numbering device to number forms consecutively as they are produced.

In the case of offset duplicating, the matter to be reproduced is prepared on a smooth, paper-thin metal plate, either directly by typing, drawing with ink or crayon, tracing through carbon paper, or photographically by the photo-contact process.

The prepared plate is placed on a drum of the duplicating machine, and ink and a repellent are fed by rolls to the surface of the plate automatically during the revolution of the drum. This drum is in rolling contact with a second drum which has a smooth rubber blanket wrapped around it. The inked image offsets onto the rubber blanket. The paper is fed between the offset blanket drum and an impression cylinder or platen, and at each revolution of the drums a complete offset duplicated copy is made on the sheet.

Typewritten matter, ruled forms, drawings, sketches, handwritten messages and halftone illustrations are easily reproduced at the rate of 3000 to 5000 per hour.

When the type has been set, the printing segment is locked in place on the machine and covered with a broad typewriter ribbon. As the printing drum revolves, each line of type comes in contact with the paper as it passes over a rubber cylinder or platen, thus producing an entire facsimile typewritten letter with each revolution. A signature device is available for signing each letter as it is printed. After the letters have been run through, the name and address may be filled in on a correspondence typewriter, using ribbons whose color matches the shade of the ribbon used on the duplicator.

*Automatic typewriters.* This class of duplicators is designed to produce actual typewritten letters rapidly. The machine consists of a standard typewriter mounted on and operated by an electric mechanism. The mechanical movements are controlled by a perforated strip of record paper similar to a player-piano roll. This record is made on a specially designed machine which is part of the equipment. The perforator has a standard typewriter keyboard. The letter to be produced is first prepared. From this copy the typist cuts the record on the perforator. Each perforation represents a character in the typewriter keyboard and is reproduced by pressing down on the perforator keys. When the cutting of the perforations is completed, the perforated paper is cut off and the ends cemented together to form a roll, which is then placed on the drum, in front of the machine. In the drum are a number of lengthwise slots over which the perforations in the record paper rest. When the

machine is started, the drum revolves, carrying forward the record paper which passes under the pins. As a perforation passes under a pin, the pin drops into a slot in the drum. By means of a mechanical connection this process actuates the typewriter keys as though by hand. After all the perforations

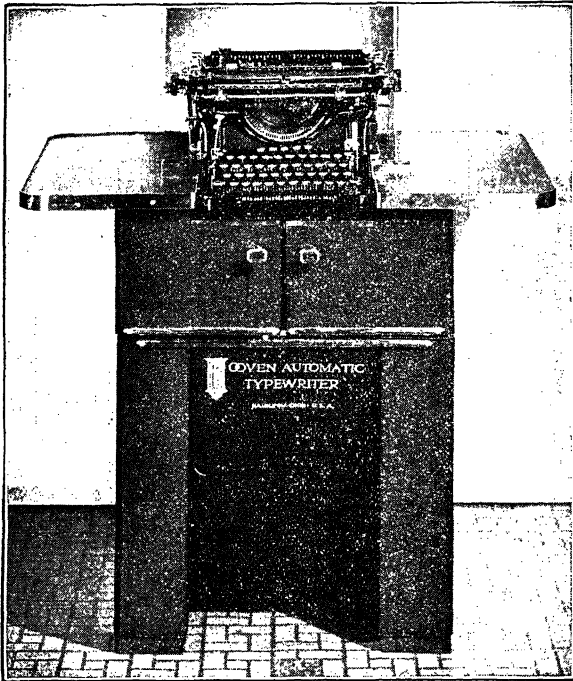


Fig. 52.—Automatic Typewriter. *Courtesy of Hooven Automatic Typewriter Corporation.*

have passed over the drum once, the operator removes the finished letter and repeats the process.

The machine also may be used as a standard typewriter, and at any point the operator may stop the automatic mechanism and typewrite, by hand, information of interest only to the recipient of that particular letter.

*Photographic copies.* Deeds, contracts, mortgages, maps, drawings, orders, letters, invoices, testimonials of all kinds can be reproduced in exact duplication.

The photocopying machine resembles a large camera. It is constructed to photograph directly upon sensitized paper, which

through a process of developing within the machine becomes the finished print. Directly below the lens of the camera and attached to the framework of the machine is a glass-top copy or subject holder. The material to be photographed is placed under the glass. As the focusing and developing are automatic, little skill is required on the part of the operator. The sensitized paper is held within the machine in a continuous roll and is fed through the exposing chamber, the developing and fixing solutions, and finally is cut off at the desired length.

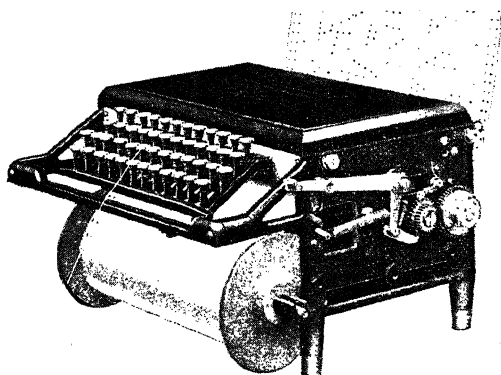


Fig. 53.—Automatic Perforator. *Courtesy of Hooven Automatic Typewriter Corporation.*

Another photocopying device is a machine used for photographing checks. This equipment includes a camera that photographs checks, or other papers, on a roll of 16-mm. safety motion-picture film. Accompanying the camera is a special projector with self-contained screen, on which enlarged negative images of the photographed papers can be projected at will. A 100-foot reel of film not much bigger than a package of cigarettes records 8000 checks. As a check is dropped into the hopper, it touches the back of the hopper, which actuates the camera in the machine. Thus, by a single movement of the hand, a permanent photographic copy is made. An experienced operator can photograph checks at the rate of 125 a minute.

### Addressing machines.

The term "addressing machine" is in some ways an unfortunate one, because it fails to indicate clearly the numerous



tasks other than straight addressing work which such equipment will do. In fact, a number of the attachments available make the work more of a duplicating process than an addressing process. Under this heading may be mentioned such work as the heading up of customers' records, inventory records, per-

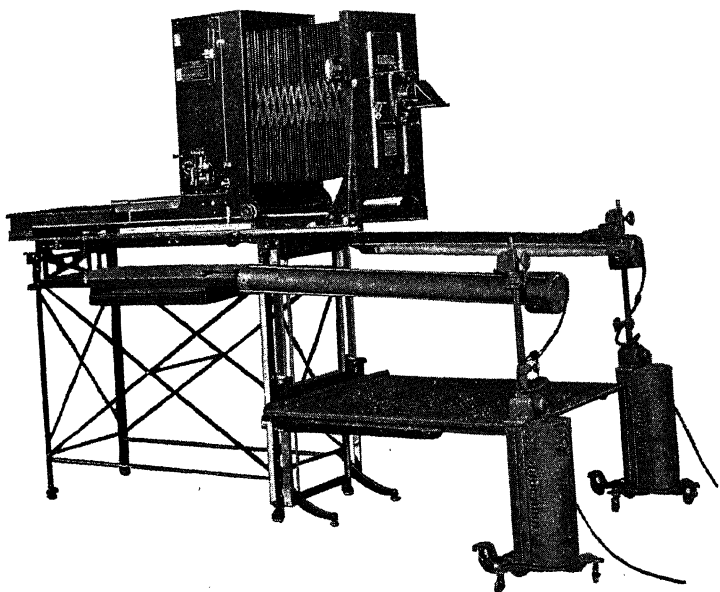


Fig. 54.—Photocopying Machine. *Courtesy of the Photostat Corporation.*

sonnel forms, ledger pages, and so on; the imprinting of short messages on postals, wrappers, folders, and swatches; the writing of dividend checks, pay checks, pay-roll sheets, pay envelopes, pay-roll receipts, stockholders' lists, and voucher checks; and the preparation of production orders, progress records, schedule and routing cards, and time tickets. One addressing machine company has developed a duplicating machine which combines the preparation and the addressing of a letter, through the use of regular embossed address plates, in such a way that the principal disadvantage and difficulty of securing a good match between the name and address and the body of the letter has been largely overcome. This same company also offers a combination printing and addressing machine, which, by pass-

ing blank paper from rolls over a series of imprinters, not only prints the body of the form, in regular printer's type, but addresses it at the same time. The ordinary telephone bill is a specific illustration of the work of this machine.

*Available kinds of equipment.* There are two basic kinds of addressing equipment available: one that utilizes an embossed metal plate, and one that uses a fiber stencil. In all other respects the general principles of operation of both types are

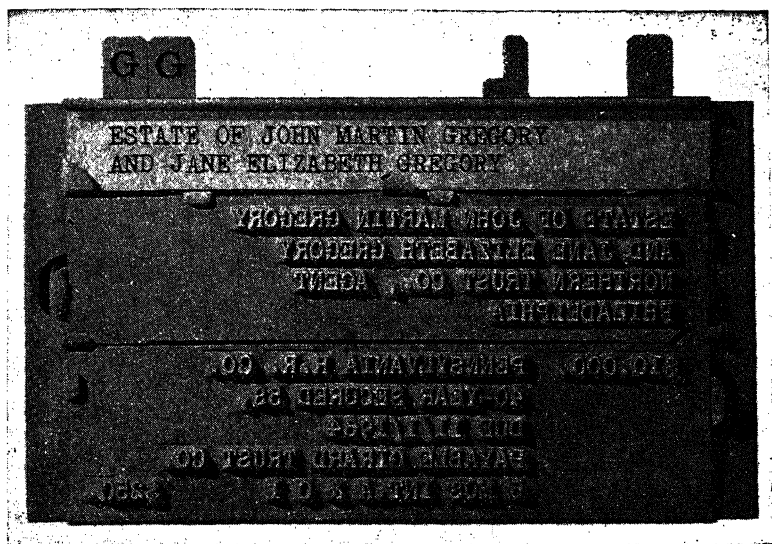


Fig. 55.—Embossed Metal Plate. *Courtesy of Addressograph-Multigraph Corporation.*

similar. The embossed metal plate has found wider acceptance, especially in the larger companies where the letter duplication attachment, the selection device, and the printing mechanism can be used to advantage.

The embossing of the metal plate is done on the graphotype, a machine especially made for the purpose, while the cutting of the fiber stencil is done on an ordinary typewriter. In both cases the frame has space for a card on which is shown the same information which appears on the plate or stencil, thus permitting ready identification. In both systems the principle of operation is to pass the plates or stencils over an inking pad, depress them on the envelope or other paper on which the information appearing on the plate or stencil is to be copied, and

then release and pass them on into a tray or holder. Then the plates or stencils come out in the same order in which they are inserted. In each method the basic equipment may be operated either manually or electrically, although the larger attachments, such as the automatic selector, are available only on electrically operated models.

*Available attachments.* Space is not sufficient for complete explanations of the mechanical operation of each attachment. However, the office manager who contemplates the installation of an addressing machine should consider such points carefully. The various attachments available, therefore, are merely listed below with a brief explanation of the main purposes of each.

A machine equipped with an *automatic selector* can be made

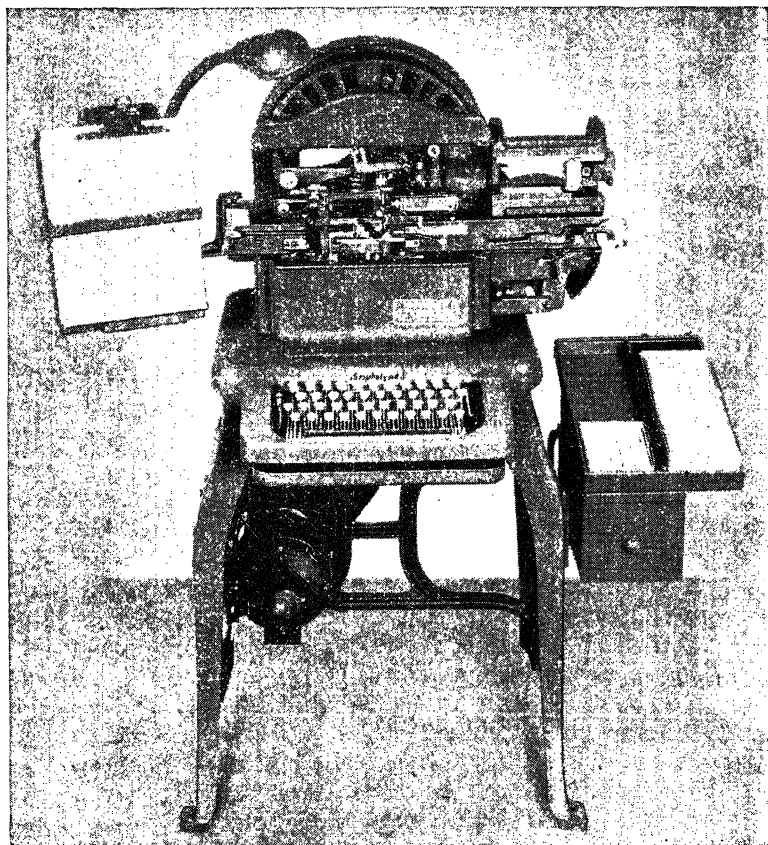


Fig. 56.—Graphotype. Courtesy of Addressograph-Multigraph Corporation.

to skip the printing of certain plates or stencils automatically as they are fed through. The operation of the selecting device is governed by removable vertical filing tabs or boss points in the case of metal address plates, and holes or slots in the case of fiber stencils.

The *cut-off* makes it possible to non-print certain portions of addresses. For example, a stencil or address plate may contain a customer's name, his address, and a salutation. When

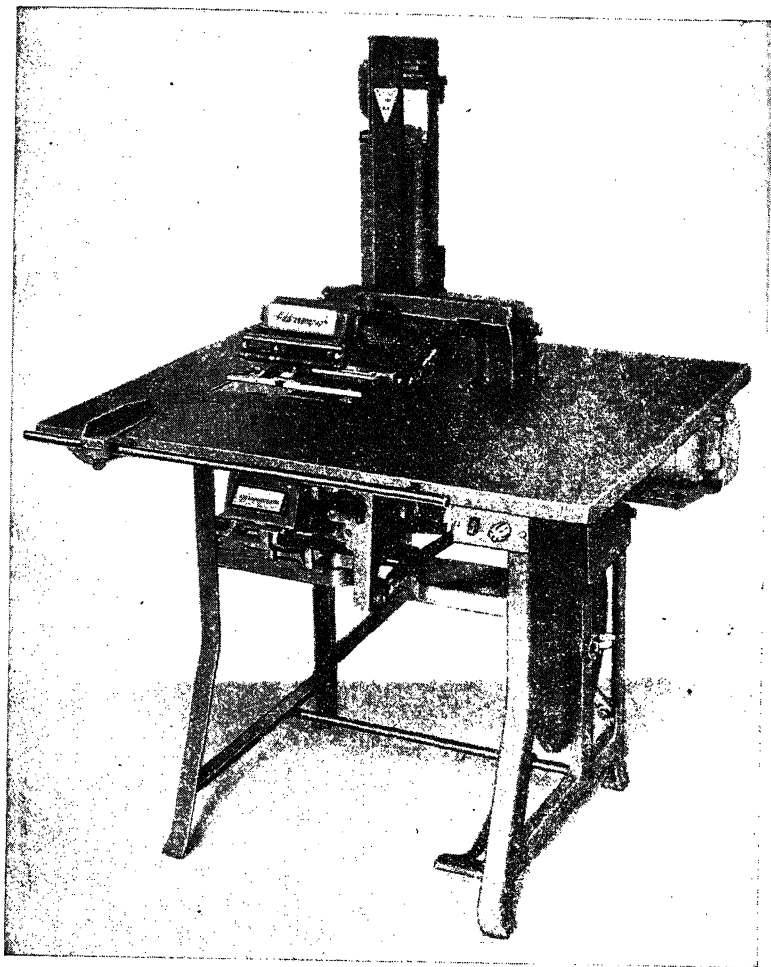


Fig. 57.—Addressograph. *Courtesy of Addressograph-Multigraph Corporation.*

this stencil or plate is used to fill in a form letter, the name, address, and salutation are all printed. But when an envelope is addressed, the salutation can be automatically "cut off" and only the name and address will be printed. Another common application of the cut-off is in the heading of pay-roll forms.

Some machines are furnished with *daters*. The dater is an attachment that makes it possible to fill in the date at the same time that the addresses are run. When form letters, statements, invoices, and so on are handled by the addressing machines, the dater attachment is invaluable.

The *duplicator*, furnished on certain machines, causes the address plate to be held in printing position for two impressions. It is used, for example, both for heading statements and for addressing envelopes to each customer at the same time and for printing the back and front of time cards.

The *automatic ejector* is found only on certain small hand models. After a form is printed the automatic ejector removes it from the printing point, throwing it into a box at the side of the machine. This device adds considerable speed to the hand models for straight addressing work.

The *lister* is an attachment that is used to list names, addresses, or other data on proof, blank, and printed sheets, on loose-leaf forms, checks, tags, and labels, automatically feeding the forms and automatically spacing the proper distance after each printing.

By means of the *hand spacer* it is possible to leave one or more blank lines at will so that data may be later written or typed between the addressing-machine impressions.

On some machines a number attachment prints either consecutively, in duplicate, or in triplicate, from 1 to 999,999.

The *repeat* attachment prints any number of impressions from the same plate or stencil. Some machines are provided with a hand repeating device, others with a foot lever that permits the repeating of any plate or stencil at the will of the operator, while skipping or consecutively addressing the remaining ones.

By means of the *skipper* it is possible to skip any addresses which are not to be printed. All plates or stencils, after printing or skipping, are automatically refiled in original order.

Some machines can be equipped with *signals*—devices to inform the operator when the printing of certain groups of names has been completed. It may be desirable, for example, that the operator be informed when all the names in one department have been printed on the pay-roll sheet, so that space can be left between the groups of names in different departments.

The *automatic envelope feeder* is self explanatory.

*Limitations of addressing equipment.* Some of the many uses of the addressing equipment other than straight addressing work have already been mentioned. Any kind of business with a volume of work large enough to justify the cost of installation finds many uses for such machines. A sufficient volume of repetitive work, however, is essential. If the same name and address is to be used only a few times a year, hand or typewriter addressing is more economical.

It is also to be remembered that despite efforts by the manufacturers to avoid it, the stencil or plate address on an envelope is usually quickly recognized as such by the recipient. Consequently, many advertising men prefer to have direct mail material addressed by typewriter or by hand, even at a higher cost. So much direct mail literature is thrown in the waste basket anyway, in many cases without even being opened, that advertising managers naturally wish to avoid anything that gives the impression of a mass-production effort.

### Time-recording machines.

Time recorders are of two general kinds: those in which the card or paper is inserted in the machine, as in the case of job cards or time stamps, and those in which the record is made on a paper wound around a drum located inside the machine, as in the case of the drum type of in-and-out recorder. Equipment is either mechanical or electrical. The principal types of time-recording devices and their uses are:

*In-and-out or attendance record.* In this case the employee usually registers his time four times a day, when he arrives in the morning, when he goes out at noon, when he returns, and when he leaves at night. Either the card recorder or the drum-dial recorder are used. The dial type has the advantage of making it very easy for the pay roll department to make up the pay roll.

*Job recorder.* The chief use of the job recorder is in the factory, where it is necessary to know the time spent by each employee on each job number upon which he works during the day.

*Time Stamps.* Hand- and electrically operated time stamps for stamping incoming mail and other papers are widely used. The paper is placed in the machine, and the time is recorded either to the minute by stamping, as for example, 9:13 A.M., or within a fifteen-minute period by a stamp which makes a clock-

dial style of imprint on the paper. The day, month, and year are also imprinted in both cases.

### Other available office machines and appliances.

In the foregoing discussion, the principal kinds of office machines and appliances have been described briefly and non-technically, and some of their chief uses and applications have

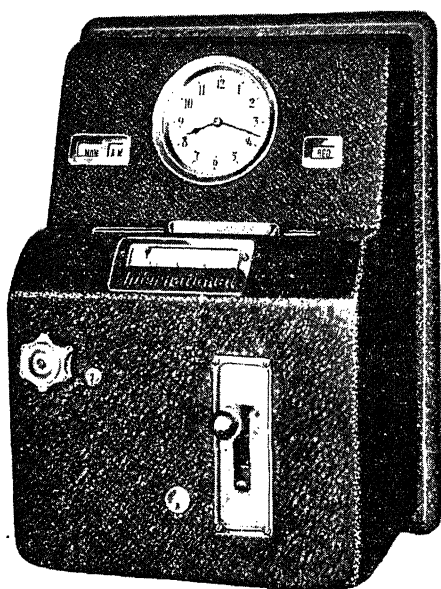


Fig. 58.—Card Type Time Recorder.  
*Courtesy of International Business Machines Corporation.*

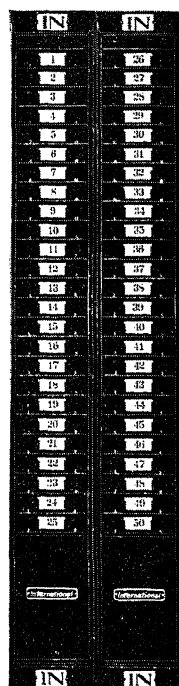


Fig. 59.—Card Rack.  
*Courtesy Int. Bus. Machines Corp.*

been indicated. Yet there are numerous additional machines and appliances used in business offices, of which no mention at all has been made. Among the more important of these are:

1. Check protectors, writers, certifiers, endorsers, cancelers, and signers.
2. Autographic registers and manifolders.
3. Loose-leaf equipment.

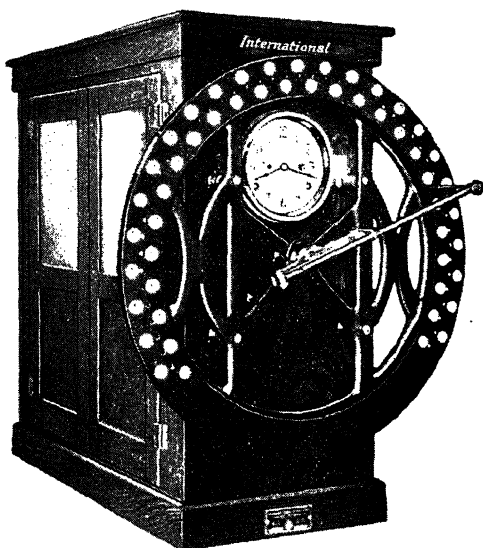


Fig. 60.—Drum Type Time Recorder. *Courtesy of International Business Machines Corporation.*

4. Envelope moisteners.
5. Folding machines.
6. Numbering machines.
7. Paper-cutting, punching, and perforating machines.
8. Telephone indexes.
9. Envelope openers.
10. Hand stamp affixers.
11. Sealing machines.
12. Combined sealing and stamping machines.
13. Metering-permit machines.
14. Non-metering-permit machines.
15. Postal scales.

**Summary.** As this and the preceding chapter should make clear, the field of office equipment and appliances is a large and important one. New developments are taking place constantly. Present machines are being improved, and additional uses are being found for existing equipment. An important part of the responsibility of every office manager, which is sometimes neglected because



of the pressure of daily work, is to keep abreast of these developments. No other single task is likely to bring larger returns in decreased operating costs and increased efficiency.



Fig. 61.—Electric Time Clock.  
*Courtesy of International Business  
Machines Corporation.*

## CHAPTER VIII

### *Organization and Work of the Filing Department*

Filing department a service unit. Mention has been made in a previous chapter of the fact that the office is a service department to the business departments, and that the office manager is primarily a service executive. The organization and work of the filing department illustrates this situation especially well. No matter what duty of the filing department one may be considering, an analysis of the work and the need for it will quickly show that the ultimate object is an arrangement whereby the needs of some one of the business departments may be better served. Service, therefore, is the cornerstone upon which all of the activities of the filing department are built.

Duties of filing department. Under an arrangement of centralized filing, one of the principal duties of the filing department is to act as the final coördinator of information secured through, and handled by, the other departments. This is done by bringing together in one folder or binder all correspondence and papers relating to the company's transactions with a particular concern or subject. In its capacity of coördinator, the filing department may be called upon to perform functions usually assumed by the business library, the research department, or even the statistical department, in a larger company. In this capacity it gathers and stores material regarding matters outside the company's own business. An oil company, for example, has a direct interest in having constantly and readily available

a large amount of information with reference to conditions in oil fields, statistics of consumption, development of new lands, and so on. At the same time it places in its file all correspondence and records relating to its own business. In this case the filing department is acting in the dual capacity of a library and a keeper of company records.

The preservation of all records sent to it, both active and inactive, is also a duty of the filing department. Moreover, the records must be made readily available at all times. The performance of this task not only assumes the existence of an effective method of control, but also the installation and use of types of filing systems suitable to the work. Files are not wastebaskets, nor are they places to put papers with the thought of never seeing them again. The advantage of centralizing the filing function and the various types of filing systems in use are discussed in subsequent sections.

Filing departments also render tickler or follow-up service to the various business departments. It often happens, for example, that an executive wants to have a certain letter drawn to his attention at a specified date in the future. It is the duty of the filing department to see that this letter comes to him at the proper time. The methods by which this may be accomplished also are considered below.

Gathering together and coördinating information, the preservation and distribution of both active and inactive material, and the following up of matters for future reference constitute the chief services which the filing department renders to the organization. Properly organized and administered, all of these services should be rendered, in the opinion of one competent authority, at least 99 per cent correctly. Such performance may seem to be an ideal, rather than a practical possibility, and that may well prove to be the case unless certain simple basic principles are adhered to. These may be summarized briefly as follows:

1. Establishing centralized files.
2. Training workers adequately.

3. Providing plenty of space and air.
4. Installing a suitable filing system.
5. Providing proper equipment.
6. Transferring inactive material from the active files periodically.
7. Providing good supervision and one responsible head.
8. Issuing standard instructions.
9. Securing the coöperation of the entire organization.

**Centralization.** In discussing types of office organization, in a previous chapter, it was stated that the fully centralized type is almost never found in actual practice. Applied to the filing department, this means that there are always papers, such as executive files, confidential files, corporate and financial papers, and so on, which are and should be kept in private or departmental offices rather than in a centralized filing department. On the other hand, it is also true that in many cases papers which a young or egotistical junior executive may like to regard as highly important and confidential are, as a matter of fact, simply part of the routine business of the company and, consequently, belong in the general files rather than in his private office files. It should never be forgotten that all papers handled by any company employee, whether he be the chief executive or the office boy, belong to the company and not to the individual.

**Advantages of centralization.** Centralization of the files in one department yields a number of outstanding advantages which no departmental arrangement can possibly bring about.

In the first place, centralization results in the concentration of trained employees. Instead of a miscellaneous group of stenographers, clerks, and junior executives doing the filing or going to the files occasionally for papers, only people with specialized training and experience do the filing. As a result the filing is better done.

Centralization of the files also results in a uniform system of indexing and filing. The various types of filing systems and indexing methods are discussed later in this

chapter. Uniform service for all departments in such matters as the attaching of previous correspondence to incoming mail, follow-up, and transfer are also secured under a centralized plan. Since correspondents, senior clerks, and executives may be transferred from one department to another, uniformity in service of this kind is extremely helpful.

Centralized filing relieves other employees of this work. Provided, of course, that papers can be quickly and readily obtained from the centralized files whenever they are wanted, employees welcome the shifting of this responsibility. The ability to place responsibility definitely at one source is one of the outstanding advantages of centralized filing.

Many instances might be given to prove that centralization is of distinct money value in the saving of equipment. Where each department maintains its own files the natural tendency, and in fact the actual necessity, is to provide a liberal amount of filing space. A department, for example, may have sufficient material to fill six file drawers. Filing cabinets are, however, usually purchased in units of four drawers to the cabinet. Thus one must have, under a departmental plan, eight drawers available in order to obtain the use of six. Duplication of guide cards and folders is also a necessary part of a departmental arrangement. A reduction in the amount of money invested in filing cabinets as well as the amount spent for filing supplies may, therefore, be expected to be the result of the adoption of a policy of centralization.

Since certain employees spend their time exclusively in filing work, centralization gives assurance that the files are up to date at all times. Under the departmental arrangement it is almost a certainty that some papers will be found reposing in the file basket, waiting for the day when the stenographer or clerk has a little extra time to put them away. The fact that under a departmental plan all papers may be accessible somewhat more quickly, therefore, may

often in practice be counterbalanced by delays incident to finding unfiled material.

Last, but by no means least, centralization of the filing function assures having all correspondence and other papers regarding one subject or transaction with one company in one place or in one folder. Under any possible departmental plan, correspondence with a given firm or on a certain subject is bound to be scattered among many departments. Thus it is extremely difficult, if not impossible, for anyone to secure the complete story of the company's relations with that firm. Under a centralized system all correspondence with the firm in question is kept in one place. The result is uniformity in policy and the impossibility of "crossing wires."

**Disadvantages of centralization.** Although for the most part centralization of the filing function has more advantages than disadvantages, it is nevertheless true that in many cases executives, department heads, and others to whom the policy of centralization is suggested, fear that certain disadvantages would result from the adoption of such a policy. Consequently they may oppose the plan. Some of these claimed disadvantages are more nearly true in theory than in fact. Others, however, may be real disadvantages, under certain practical working conditions.

For one thing, the claim is almost always made that centralization of the files will result in considerable inconvenience to department heads and to others who have been accustomed to have their files close at hand. Whether this claimed disadvantage is true in practice depends, from the writer's observation, almost entirely upon the type of service which the centralized files give and the amount of effort which those charged with the responsibility of operating the centralized files are prepared to exert to make centralization effective. If an adequate system of conveying papers from the filing department to the business departments is set up, through either the establishment of an efficient messenger service or the installation of mechanical

conveyors, such as tubes or overhead carriers, then papers can be obtained from the filing department without any appreciable loss of time. If, however, the company is not willing to spend the necessary money and effort to provide such a system, then centralization inevitably will lead to great inconvenience on the part of department heads.

**Filing standards of the Nashua Gummed and Coated Paper Company.** The following table of allowances, in minutes, for various classes of filing work, used by the Nashua Gummed and Coated Paper Company in connection with their incentive compensation plan for file clerks, indicates the high standards, which are essential to prompt service, that this company maintains<sup>1</sup>:

Putting folders into the filing drawers—.377 minutes per folder.  
Filing stickers in sorter—9.33 minutes per pound (55 per pound).

Filing stickers into files—25.33 minutes per pound (55 per pound).

Filing invoices into sorter—22.66 minutes per pound (140 per pound).

Filing invoices into files—50.65 minutes per pound (140 per pound).

Filing correspondence into sorter—12 minutes per pound (125 per pound).

Filing correspondence into files—63.32 minutes per pound (125 per pound).

**Look-ups:**

Class 1: Where entire folders are requested—.55 minutes per look-up.

Class 2: Where a particular form is required (for example, a piece of correspondence or an invoice)—1.42 minutes per look-up.

Class 3: Where more than one piece of correspondence is required—1.61 minutes per look-up.

Typing new folders—.61 minutes per folder.

Telephone calls, with look-ups—2.15 minutes per call.

Telephone calls, without look-ups—.85 minutes per call.

<sup>1</sup>Tacy, O. L., "Filing Studies to Reduce Costs," *Annual Proceedings*, p. 91. National Office Management Association, 1929.

A second claimed disadvantage of centralizing the filing function arises from the fact that the various business departments each have different needs. It is said, for example, that the credit department will want its correspondence kept alphabetically according to customers' names, whereas the sales department may wish to have a cross index of customers and prospects by salesmen or by territories. This objection may be largely overcome by the installation of a proper filing system. It is true that the needs of the various departments differ, but it is also true that competent and experienced people are readily available who can work out a system which will fit the needs of the various departments and yet permit centralization of the filing function. The subject of filing systems is discussed in a subsequent section in this chapter.

**Centralization not practicable in all cases.** Despite the fact that certain claimed disadvantages of centralization can be overcome by the installation of an efficient messenger or conveyor service and by the use of a filing system which meets the specific needs of the company, there remain certain cases in which centralization is impracticable. In the first place, there are the correspondence and other papers of important executives. Much of this material is clearly confidential and should remain in departmental or executive files. Many of the records and reports of the financial and accounting departments are necessarily filed in these departments and should not go to a central filing department. Because of the nature of its work and contacts, it is unusual to find any of the correspondence and records of the purchasing department in the central files. Engineering data in most cases are kept within the department itself. The legal department offers another illustration.

The important point to be borne in mind is that centralization of the filing function is a desirable and practicable arrangement in most organizations and for the majority of the departments, but that there are certain departments in



every company and in some few business organizations in which a decentralized or departmental plan is much the better working system. This is a practical point that is sometimes overlooked by those who see in centralization a panacea for all filing problems.

**Procedure followed by the Studebaker Sales Corporation.** A compromise solution has been worked out to excellent advantage at the Studebaker Sales Corporation of America. The geographical distribution of the departments through a large office building and elsewhere on the plant make one central filing department impractical. Further, there is the usual preference of some department heads for files under their own control in their departments. Several major divisions therefore have their own files—purchasing, production, sales, accounting and financial, and so on. Each is a large unit. There is no central department. The whole group is, however, under the authority of one girl who is a “working foreman” of all files. She works out the filing systems and is in charge of all file clerks. When one division has a heavy load or gets behind, the supervisor borrows a girl from a section where the work is lighter at the moment. Thus the work keeps flowing, and no department has the extra filing help which otherwise would almost surely be employed to care for peak loads.

**Routine of filing department operation.** Assuming that the filing function is organized on a centralized basis, at least as far as such a plan is practicable, the following routine of filing department operation is typical.

1. When a letter is received in the filing department from the incoming-mail department, it is first time-stamped. A file clerk then reads enough of the letter to determine whether it will be necessary for the recipient to have the file containing the previous correspondence in order to answer the letter just received. If the previous correspondence is necessary, the folder is taken from the files, charged

to the dictator to whom it is sent, and forwarded, together with the incoming letter, to the proper person.

2. After the reply has been dictated and transcribed and the original letter signed, the carbon copy, together with the original letter and the file folder, if it has accompanied the correspondence, is returned to the files. In many companies the dictator or his secretary indicates the name of the company, person, or subject under which the reply is to be filed. In this way letters addressed to one company but referring to business with another are insured proper filing. Similarly, in cases where two copies are made of a letter for the purpose of filing each under a different name, marking them in this way makes certain that they will be placed by the file clerk in the correct folders.

3. The carbon copies of outgoing letters, together with the original copies of incoming letters, are then sent to the head file clerk's desk for sorting and for stamping specific filing instructions to the file clerks. In this way the head file clerk not only is kept in constant touch with the papers passing in and out of her department, but any matters which deserve special comment or instructions are taken care of at the right time—before they get into the files.

4. After all returned papers have had the attention of the head file clerk or her immediate assistant, subordinates proceed to sort them for filing and refiling purposes. Old files are placed in a pile by themselves, while new carbon sheets are sorted, first roughly, by main alphabetical divisions, and then later in a more exact way. Where the volume of sorting work of this kind is large, the use of marked letter trays or of accordion alphabetizers is recommended.

5. If index and cross-reference cards are used, they should be prepared before new material is finally put away. The preparation and use of indexes and cross-reference cards is discussed in a subsequent section.

6. The last step in the filing-department routine is the

actual filing or putting away of the new material in the file folders. The almost universal custom is to place the letters in the folder so that the last date is on top, or, in cases where a numerical system is used, to place the letter so that the highest number is on the top of the folder.

**The charge-slip system.** Mention was made in the previous section of the fact that when complete file folders or individual letters are removed from their place in the files, the person to whom they are sent is charged with them. The usual charge system consists, in the case of an entire folder, of inserting in the files in place of the folder an 8½ by 11 inch card of distinctive color which is prominently marked "Out" at the top. On the body of the card are columns for noting the date on which the folder was removed from the files, the person to whom it was charged, and the date on which the folder was returned. The same plan may be used in the case of individual letters, the only difference being that in this case a single sheet of paper rather than a card is substituted in the file folder in place of the letter which has been removed.

Too much emphasis cannot be laid on the importance of providing, in any filing system, for some such charge plan as has been outlined. One of the chief reasons why filing systems, both centralized and departmental, do not always yield the best results is that no systematic method is provided whereby a proper record may be kept of material removed from the files. It should be obvious that, just as soon as anyone in the organization is allowed free access to the files and no provision is made for charging material taken out, the system must fail sooner or later.

**Methods of controlling papers.** The charge-slip system just outlined provides one effective method for controlling papers in a centralized filing department. The establishment of a strict rule that no one but file clerks shall be admitted to the filing department, much less have access to the files themselves, is another practical means whereby

the operations of the filing department may be made more effective. In some companies it is a rule that all papers must be returned to the files every night, even though they may be required again the next day. Many banks and stock brokerage houses keep daily records of all incoming and outgoing correspondence. This is a relatively expensive method of controlling papers, but it is sometimes warranted, particularly where large sums of money may depend on the contents of a single letter.

**Checking the work of the filing department.** The practice of having the head file clerk make a periodic spot check of the file folders to determine the accuracy of their contents has much to recommend it, not only from the standpoint of finding possible errors, but also because of its effect on those doing the actual filing.

As a matter of fact, there is no reason why the work of the filing department should not be audited in exactly the same way as that of any other department. In addition to periodic checks by the supervisors, office managers themselves, in a number of companies, make such inspections occasionally. For example, the office manager or the person making the file audit may list a hundred letters or other papers by name and date as they come across his desk during the ordinary day's work. At the time of the audit he may ask that these be secured from the files, or that a statement be made of who has them, if they are charged out of the file.

Another approach is to examine in detail a dozen or more folders picked at random from the files. In any case, the primary purpose is to test, by the sampling method, the accuracy of the filing job being done. Theoretically, the office manager should perhaps verify the fact that every paper is correctly filed, but as a practical matter this is not always feasible, and the sampling method therefore must be used. No matter what system is used, it is highly important for the office manager to bear in mind the fact that papers are to the office what raw materials and finished

parts are to the factory, and, as in the factory, some systematic method of controlling the work in process must be established if the best results are to be obtained.

Filing department reports for control purposes. In addition to auditing or checking the accuracy of the filing work, it is essential, in a medium-sized or large office, that

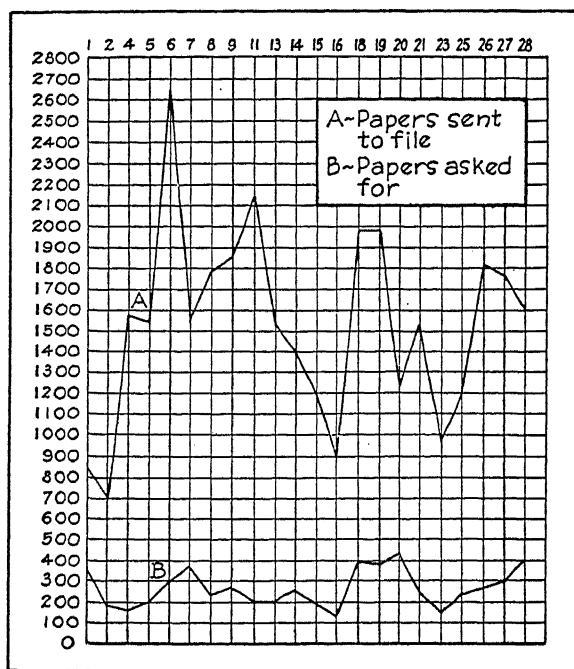


Fig. 62.—Volume of Work Chart.

the office manager, as well as the head file clerk, have periodic reports whereby they may be constantly in touch with the amount of work being handled by the filing department and the manner in which it is being done. Figure 62 illustrates a "Volume of Work Chart." A glance at this chart shows at once the difference between the number of papers called for and the number sent to file. It also brings out clearly the fact that the volume of business which the filing department is called upon to handle fluctuates very

considerably as between various days in the week and also as between different days in the month.

Figure 63 is a "Demand and Delivery Chart," which shows the number of papers asked for, the number of papers requested but not delivered, and the number of papers not

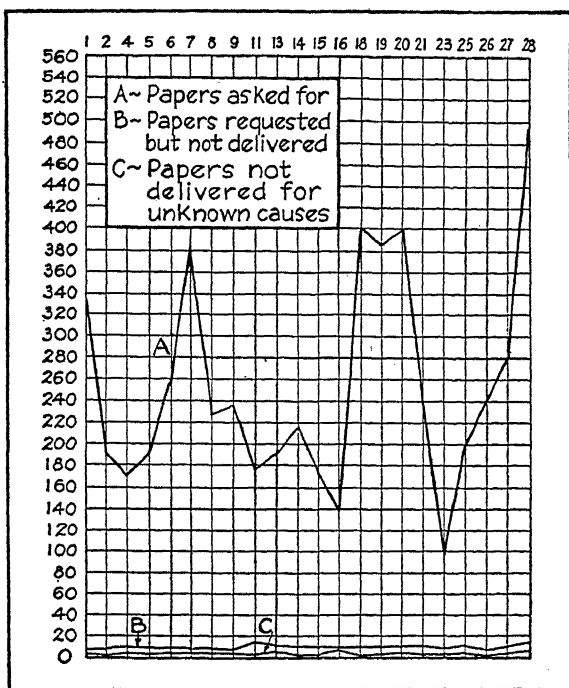


Fig. 63.—Demand and Delivery Chart.

delivered for unknown causes. The preparation of a chart of this kind, and its periodic circulation among department heads and executives, will do much to convince them that the percentage of errors in filing which may properly be laid to negligence of the filing department is much lower than they may suppose. When a particular paper is lost the executive who has requested it usually takes occasion to berate the filing department and loudly to announce that "they never can find anything anyway." The very

best defense that the office manager and the head file clerk have against such accusation, which is important if true, is some such set of figures as those on which Figure 63 is based.<sup>2</sup>

### Types of filing systems.<sup>3</sup>

There are five basic systems of filing: alphabetical, numerical, geographical, chronological, and subject. There are also a number of other systems in use. However, they are fundamentally offsprings of these basic systems or a combination of two or more of them. Each system is particularly adapted to certain classes of work. No one system, of course, is superior to all others. Each system, however, meets certain conditions better than any other one can. The system must be selected, therefore, for the particular need, and not merely because it has worked well in some other line of business. Fitness for the particular work in question is the practical test which must be met.

#### *The alphabetical filing system.*

This system is the simplest, the oldest, and by far the most common in use. In it, guides of heavy cardboard or pressboard are arranged in the files in accordance with the sequence of the letters in the alphabet. The folders containing correspondence are then placed in alphabetical order behind the proper guides. The number of guides is not limited to the number of letters in the alphabet. There may be any number of guides, depending upon the volume of material to be filed. Thus in the first or "A" section, there may be such guides as Aa-Ac, Ad-Ah, Ai-Ar, As-Az; in the "B" section, Ba-Bc, Bd-Bh, and so on through the entire alphabet. A liberal use of the guides considerably reduces the work and time of filing.

The chief advantage of the alphabetical system lies in its simplicity. There are certain marked disadvantages, however. As the volume of filed material increases, the number of subdivisions under each alphabetical section must be increased. If the alphabet is too finely subdivided, the system becomes complex, filing becomes more difficult, and the possibility of mis-

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<sup>2</sup> Figures 62 and 63 from Scholfield, Ethel, *Filing Department Operation and Control*. Ronald Press Company, New York, 1923.

<sup>3</sup> Adapted from Cornell and MacDonald, *Business Organization and Practice*. American Book Company, New York, 1936.

placing correspondence increases. Another serious disadvantage is the need of allowing for expansion of the files in each drawer, without which the entire file would have to be rearranged. This allowance for expansion necessitates additional equipment and more room for files, both of which are important items of cost and space in the average office.

### *The numerical filing system.*

Under this system all material is filed in numerical sequence, which is an advantage, as the mind works more readily with numbers than with letters. This is, however, an indirect method of filing, since it can be used only in conjunction with an auxiliary card index. Main guides of distinctive color are used to indicate hundreds, with additional guides at intervals of ten or twenty. Unit guides are not necessary, as the folders are numbered consecutively and the numbered tabs on the folders themselves act as guides.

Under the numerical system each new correspondent is given a number. The numbers are assigned consecutively, beginning with one. An index card is made out with the correspondent's name and number, and the card is filed alphabetically in a card index. Thereafter, whenever a letter comes from a correspondent, his name is looked up in the card index and his number marked on the letter to be filed. This facilitates refiling, as it does away with further reference to the card index for that particular letter.

Advantages of the system are the rapidity and accuracy of refiling and the opportunity for indefinite expansion. For the average company, however, these are more than offset by the disadvantage of having to maintain the auxiliary card index and of having to make two searches, one of the index and the second of the files, every time papers are withdrawn from the files or new material is added.

### *Subject filing.*

Under certain circumstances, filing by subject or title is desirable. This is especially true when there are a large number of letters from different persons or concerns relating to the same subject. Common examples of such cases are in connection with the letting of large contracts or the handling of complaints. Railroads and insurance companies use subject filing to advantage.

Great care must be taken in the selection of subject head-



ings, otherwise confusion will result. The selection of titles should be in the hands of one competent person. If several persons select the various titles, there is apt to be trouble, as two persons rarely view a subject in the same light. Each of them may give a different title, equally correct. After the subjects or titles are selected, guides are made out for each. All papers relating to that subject are then filed back of each guide. These papers may be arranged either alphabetically or numerically.

*Use of subject filing by the Canadian National Railways.*

The procedure used by the Canadian National Railways in designing subject filing systems for their hotel operating, sleeping and dining car, freight traffic, colonization, and publicity departments illustrates one practical application of this method.<sup>4</sup>

1. A list is secured of the activities of the department concerned.

2. This list is compared with any existing lists in use in that department. (These lists are to be studied by the designer, to familiarize himself with the terminology and operations of the department.)

3. The main activities of the department are then selected and arranged in alphabetical order.

4. The important subdivisions of the main activities are next selected.

5. The sub-subjects are studied to see if two or more related angles of the main subject can be grouped together without having too great a volume of correspondence placed under these sub-subjects.

6. Sub-subjects are next arranged alphabetically under each main subject.

7. A complete chart of subjects, covering fully the main and sub-subjects, is then made and checked against the correspondence, to insure that all angles of all subjects are covered.

8. Numbers are then assigned to each subject; two-figure numbers, three-figure numbers, or four-figure numbers are used, depending on the total number of subjects.

9. An explanatory paragraph is then written for each main subject and sub-subject as it appears on the chart. These explanatory paragraphs contain a complete definition of all subjects and indicate a clear-cut dividing line between subjects which

<sup>4</sup> Stapleton, C. U., "Railway Filing Methods," *Annual Proceedings*, p. 87. National Office Management Association, 1929.

are apparently related. This avoids confusion in the classification of files.

10. The best method of sorting the files under each subject is next decided upon. For example, can the files best be sorted alphabetically by name of person, firm, place, or commodity, or perhaps chronologically or geographically?

11. An alphabetical cross-reference index is then made from the chart of subjects and explanatory paragraphs. This is usually made in book form, together with a copy of the chart of subjects and explanatory paragraphs.

12. Gummed labels are typewritten and pasted on the shoulders of the file guides and index guides in a standardized position and arrangement.

13. The operation of changing the files to the new system now begins. A file record is always left under the old number, with a cross-reference notation showing the new number.

14. While the files are being changed over to the new system, each file title is checked against the alphabetical cross-reference index, and if there is no entry in the cross-reference book corresponding to the file title selected, an additional entry is made.

15. Rules and regulations for the operation of the filing system are explained fully to the staff, and written copies are left not only with the file clerk, but also with anyone who has anything to do with correspondence.

### *Dewey decimal system.*<sup>5</sup>

This system of filing is based upon the Dewey system of classification used in libraries for grouping books on related subjects. In the library classification the entire field of knowledge is divided into ten major groups of subjects, under each of which there are many subdivisions.

In a business organization all correspondence is classified under one of ten main headings; each of these classes, in turn, is further divided into ten divisions. For example, one of the ten main groups or classifications may be "Personnel." Assume that the number 100 is assigned to this subject. Under this main class there are ten subdivisions, one of which is "Employment." This might be 110. Employment is also divided into ten classes, one of which is "Labor Supply," which may take the number 111. "Labor Supply" would be divided

<sup>5</sup> Adapted from Cornell and MacDonald, *Business Organization and Practice*. American Book Company, New York, 1936.

into ten headings, one of which would be "File Clerks," which may be numbered 111.1.

The Dewey decimal system is not widely used, except in cases in which it is not so important to know whom the information is from as it is to have the information collected in one place with all like data. An alphabetical card index must be used, of course, in conjunction with it.

### *Geographical filing systems.*

This method of filing is used principally in sales work, and in cases where the country, state, county, or community, rather than the name of a company or individual, is the chief unit of consideration. Guides are made out for each geographical division and the folders filed in alphabetical order back of the respective guides. Very often main guides of distinctive color are made out for each state or territory, with auxiliary guides for the counties or cities. In some instances a distinction in color or position of the tab is made between the folders of customers and those of prospective customers. An auxiliary alphabetical card index is ordinarily used in conjunction with this system.

### *Chronological filing.*

In the chronological system all letters are filed according to date, either in the order in which they are received or according to the date upon which the letter should have attention. Main guides are made out for the months, with auxiliary guides numbered 1 to 31 for the days of the month. The letter is then filed back of the guide marking the proper date. In many instances folders are not used, the letter merely being filed back of the guide. In other cases the daily guides are not used, the number of the day of the month being plainly marked on the tab of the folder and the folder acting as a guide.

Chronological filing is often used in collection work. For example, assume that a customer, whose account is past due, writes to the collection manager saying that the account will be paid on August 6. The letter is filed in the folder for August 6. When the 6th of August arrives, the matter is automatically brought to the collection manager's attention. If it is necessary to refer to a letter other than by date—by name, for instance—an auxiliary alphabetical card index is used or an extra carbon copy of the letter is made and filed alphabetically.

The chronological system also is used in what is known as the "tickler" file. This usually takes the form of a small box

built to hold 3 by 5 memorandum cards. When a person wants a certain matter to come to his attention on a particular date, he simply makes a memorandum of that fact on a card for that date and puts the card in the proper place in the box. When the date comes, he is automatically reminded of the fact. In many concerns executives and others have private tickler-card files to remind them of matters to be attended to. This serves several purposes. It relieves them of remembering a mass of details, prevents errors due to forgetting work requiring attention, and allows all letters to be kept in the general files. Important letters otherwise might be kept out for some time, preventing their use by other persons.

### *Cross-index methods.*

Cross indexing consists of preparing cards and sheets, usually referred to as cross references, which are placed wherever material might be sought in order to indicate the one place where it actually is. Imagination and judgment are needed to determine what cross references should be made. Frequently papers go into a correspondence file which easily might be placed under any one of several headings. It is the function of the person doing the indexing to make the finding of these as easy as possible.

Three different methods of cross indexing are in common use. Each serves a special purpose, and each is worthy of separate consideration.

First, a cross-reference sheet may be used. The sheet is of letter size and is filed alphabetically under the name of the correspondent. The original letter, however, is filed, not under the name of the correspondent, but under the name of the company with which he is associated. By placing some easily seen reference mark on the original letter when the cross-reference sheet is prepared, anyone handling the matter will know at once from the cross-reference sheet where the letter is filed.

The second method of cross indexing is the use of the cross-reference entry. The cross-reference entry consists merely of making a notation on the letter itself to the effect that further correspondence relating to a given subject or person will be found in a designated file folder.

A third method in use in many concerns is the cross-reference folder. The cross-reference folder differs from the two methods in that it assumes a permanently fixed policy in filing certain papers. Cross referencing of periodic reports is a very usual

example of the use to which the cross-reference folder is put. A monthly report for the sales department, for example, which is officially entitled "Monthly Report of Sales by Classes of Products," may be referred to simply as the "Monthly Sales Report," or it may be referred to under the heading mentioned above. By filing this report in one of the two possible places where it might be, namely, under the head of "Sales" or "Reports," and then preparing a cross-reference folder for insertion in the files in the place where the report itself is not filed, the cross index can be made to accomplish the purpose for which it was established, namely, to provide a reference which indicates where the material really is.

In many cases cross-reference cards rather than cross-reference folders are used, the card being merely a substitute for the folder. This method is used chiefly when the file is a subject file and when each folder contains a number of papers which may be referred to in two or more ways. The use of cross-reference cards is more simple than the use of cross-reference folders and may be used to prevent the making of too many folders.

It is, of course, true that both the cross-reference folder and the cross-reference card have the disadvantage of making it necessary to look in two places for material. There are many circumstances, however, under which this is almost unavoidable.

**Follow-up methods.** All follow-up systems in an office are based upon the principle of the chronological file. The simplest of all follow-up methods is the so-called "tickler file," the operation of which was described in a previous section.

A variation of this plan is frequently used in connection with correspondence that must be filed in the regular way with other letters and papers, but which someone in the office wishes to have brought to his attention at a later date. In this case the executive may mark on the letter itself "C.U." (call up) or "F.U." (follow up), and below that the date and his initials. When this letter reaches the files the name of the company, the date of the letter, and the name of the person who wants the material are entered on a card or sheet under the date of the "call up." The

first thing, each morning, the head file clerk takes out the card or sheet showing the folders wanted on that date, has the desired material secured from the files, and sends it to the proper departments and individuals.

**Storage of inactive material.** No discussion of the organization and work of the filing department would be complete without reference to the ways in which inactive material is separated from the active correspondence and stored until such time as it may be destroyed. To many office managers and employees the transferring of material from the active to the inactive files is a distasteful task, because it adds to the burden of clerical work. It is important to recognize the fact, however, that the use of office space to store a considerable quantity of material which might as well or better be stored in less expensive quarters is much too wasteful and expensive a procedure to follow. Moreover, equipment used for filing active material is considerably more expensive than transfer cases, which are ordinarily used for inactive material and serve the purpose equally well.

The first step in transferring material from the active to the inactive files is to decide what material can be deemed active and what inactive. Naturally, the decision on this matter will depend not only on the kind of business in which the company is engaged, but also on the nature of the material itself. In a manufacturing business, for example, the unit of work is usually the customer's job or order. When the work has been completed on a particular order and the last shipment of the goods made and paid for, that transaction is usually completed and closed. In such cases all correspondence and papers relative to the order should be kept in the active files for, say, three months after receipt of payment. At the end of this time they may be removed. In the same company, however, receipted bills for purchases made will naturally be kept until after the legal time limit for bringing suit, as set forth in the statute of limitations, has expired. On the other

hand, banks and brokerage houses are necessarily forced by the nature of their business to keep some of their documents for a considerable length of time, although this material does not remain indefinitely in the active files. One brokerage house in New York City keeps its daily record of transactions for twenty years, at the end of which time the material is burned. Insurance companies necessarily preserve all papers in connection with every policy issued. This is done for their own self-protection, as well as in the interest of the policyholder. When one considers that many insurance companies have outstanding hundreds of thousands of individual policies, every one of which is of vital interest to a number of individuals, the importance of this matter, as well as the complexity of the whole problem of record-keeping, becomes more apparent.

**Legal limitations.** How long records and correspondence having to do with contractual relations should be kept depends, among other things, upon the several state laws covering the period during which suits may be brought. These are (in years):

Alabama	6	Nebraska	5
Arizona	4	Nevada	6
Arkansas	5	New Hampshire	6
California	4	New Jersey	6
Colorado	6	New Mexico	6
Connecticut	6	New York	6
Delaware	6	North Carolina	3
Florida	5	North Dakota	6
Georgia	6	Ohio	15
Idaho	5	Oklahoma	6
Illinois	10	Oregon	6
Indiana	10	Pennsylvania	6
Iowa	10	Rhode Island	6
Kansas	5	South Carolina	6
Kentucky	15	South Dakota	6
Louisiana	5	Tennessee	6
Maine	6	Texas	4
Maryland	3	Utah	6
Massachusetts	6	Vermont	6
Michigan	6	Virginia	5
Minnesota	6	Washington	6
Mississippi	6	West Virginia	10
Missouri	10	Wisconsin	6
Montana	8	Wyoming	10

The statutes of limitations, however, are not the only legal factor involved. Fraud is never outlawed. Any record that may involve a case of fraud should have thoughtful consideration before it is destroyed.

**Methods followed by banks and trust companies.** The following schedules for keeping old records, which are followed by two well-known midwestern banking institutions, illustrate clearly and specifically the importance of the matter of record destruction versus record keeping.<sup>6</sup>

*Bank A*

General ledgers .....	Always
Daily statements .....	Always
Individual ledgers .....	Always
Country bank ledgers .....	Always
Savings department ledgers .....	Always
Deposit slips (savings) .....	25 years
Deposit slips (commercial) .....	12 years
Savings withdrawal slips .....	Always
Cancelled checks and statements of accounts (uncalled for) after account becomes inactive or closed .....	20 years
Signature cards .....	Always
Stock ledgers .....	Always
Stock certificate books .....	Always
Certificate of deposit registers .....	20 years
Cancelled drafts, certificates, cashier checks .....	20 years
Cancelled dividend checks, certified checks .....	Always
Remittance letters from correspondent banks .....	10 years
Remittance letters to correspondent banks .....	3 years
General debit and credit tickers .....	20 years
Collection records .....	10 years
Correspondence .....	Always
Clearing records (in and out) .....	3 years
Proof department sheets .....	1 year
Analysis sheets .....	1 year
Proof books .....	1 year
Paid bills .....	20 years
Loan credit and discount register .....	Always
Draft, cashier's check, dividend check and certified check reg- isters .....	20 years
Safe deposit vault records .....	10 years
Cash books (head teller) .....	10 years
Receiving teller's cash book .....	10 years
Telegram books .....	1 year
Stenographers' notebooks .....	3 years
Bill of lading register .....	6 years
Transit letter copies .....	10 years

<sup>6</sup> *Records.* Kay Dee Company, New York, 1930.



Central file cards (closed accounts) .....	5 years
Receipts for statements .....	10 years
Auditor's copies of call statements .....	Always
Country bank reconcilements .....	10 years
Express company's receipts for currency shipments .....	3 years
Our correspondent's daily statements to us .....	2 years
Discount department records .....	Always
Pink copies of correspondence .....	Always

*Bank B*

Advices of deposit .....	1 year
Advices of loan payments .....	5 years
Accrued interest books or sheets .....	2 years
Accrued tickets .....	2 years
Advices of securities forwarded .....	1 year
Applications for travellers' checks .....	2 years
Blue copies of outgoing letters .....	(Auditor destroy)
Bookkeepers' journal and trial balance sheets .....	1 year
Bookkeepers' proof sheets .....	1 year
Branch reports of drafts drawn .....	15 years
Brokers' bills .....	5 years
Cancelled drafts, official checks .....	15 years
Certificates of deposit .....	15 years
Certificates of deposit stubs .....	6 years
Check book order books .....	6 months
Checks on closed out commercial accounts .....	6 years
Clearance ribbons (incoming) .....	6 months
Clearance sheets (outgoing) .....	1 year
Collection books (remittance—returned—collected) .....	2 years
Collection registers .....	15 years
Collection receipts .....	2 years
Collection sheets (fanfold form) .....	2 years
Commercial deposit tickets .....	6 years
Commercial ledger sheets forwarded or closed .....	15 years
Daily reports of accounts opened and closed .....	1 year
Duplicate deposit tickets .....	1 year
Escrow books and receipts .....	15 years
Foreign exchange remittance books and sheets .....	2 years
General book tickets .....	2 years
General statements .....	1 year
General correspondence .....	15 years
Liberty loans—correspondence—(mostly applications) .....	(Destroy)
Liberty loans—delivery cards .....	15 years
Loan applications .....	1 year
Order to buy and sell stock .....	15 years
Overdraft reports .....	1 year
Payment stopped cards .....	2 years
Record of items charged back .....	2 years
Registered mail (marine insurance books) .....	5 years
Return item books .....	2 years
Salary receipts .....	3 years
Savings journal .....	1 year
trial balance books (control or proof) .....	3 months

Savings deposit tickets .....	6 years
Statement stubs (commercial) .....	3 months
Stenographers' notebooks .....	6 months
Telegram copies .....	15 years
Tellers' sheets .....	2 years
Thrift coupons .....	1 year

**Classification of records.** As is clearly indicated by the foregoing discussion, it is impossible to lay down definite rules that will hold good in all cases. Nevertheless, by making a simple, common-sense analysis of the various kinds of records in a company, the procedure to be followed in each case can be determined without difficulty.

Such an analysis will show that there are, in the main, three classes of records for which a definite plan must be provided. The most important are (1) those records which contain or refer to the broad, underlying policies of the business. Such records are the "common law" of that business, one might say, and for this reason they must be kept accessible indefinitely. Next are (2) the more important records of progress, such as annual reports, summaries of departmental operations, financial statements, and so on. It is usually necessary to retain in the active files only those of a few previous years, since the report of any given current year is frequently compared with the corresponding one for the previous year. Of the least importance are (3) the records which have to do with routine matters, such as routine correspondence, inter-office memoranda, daily or weekly departmental progress reports, and so on.

With a classification such as this in mind, one can readily enough decide into which of the three groups any particular piece or class of material falls, and thus establish a definite procedure for its transfer. In general, material in class 1 should be kept indefinitely, that in class 2 should be kept from three to five years, while class 3 material may be disposed of at the end of a year.

**File-transfer methods.** Having classified the records in some such way as just described, the next step is to decide when and how the material is to be transferred from the ac-

tive to the inactive files. There are three ways in which this may be done. One plan is to transfer each year, intact, the entire material of the second preceding year. Thus, for example, the 1935 routine correspondence, periodic reports, and other material, which would fall in classifications 2 and 3 above, would be transferred in January, 1937, from the active to the inactive files. When this method is followed there is always at least one year's back material in the active files. If the classification of papers has been properly made, it is not likely to be necessary to make any more than very infrequent reference, at the most, to the material in the inactive files.

A second method, which is a variation of the first, is to transfer material of a certain age, say, one year, periodically from the active to the inactive files. This transfer may be made as often as may seem desirable; every three months is a very usual period. This "continuous transfer" method has the advantage of spreading the work more evenly over the year rather than concentrating it once a year, as is done in the case of the first method. Moreover, the continuous method avoids the sudden break that necessarily occurs when the first method is used.

A third method of transferring material from the active to the inactive files is to use a specific unit of work, such as a customer's job or order in the manufacturing business previously cited, as a basis for deciding when material is to be transferred. If this plan is used, the file clerks can be instructed to hold open as active a folder with a given order number until some definite point in the transaction has been reached, such as the receipt of a check in payment of the goods. After allowing a period of grace, such as a week or ten days, beyond this limit, during which any odd papers that may be out in the hands of the various office departments will be returned, the file clerk may consider that job order number closed, and transfer it to the inactive files.

**Arrangement of records in inactive files.** Having decided when the material is to be transferred and how this process is to be carried through, there remain for consideration the arrangement and storage of the records in the inactive files. This matter may be discussed logically under three heads: (1) the possible places of storage, (2) the kind of equipment best suited for record storage purposes, and (3) the way in which the material should be arranged.

**Storage space.** Either one of two places is to be recommended as suitable for the storage of inactive material. In a number of the larger cities, rooms especially designed for the purpose are available in certain public warehouses. In some cases these rooms are entirely empty; in other cases filing equipment is provided. Some warehouse companies even provide file clerks, whose services are available when papers are to be brought in or removed. The use of warehouse space by business firms for the storage of inactive records seems to be increasing. The chief advantages to be secured by the adoption of this plan are the security of records against damage or loss by theft, fire, or vermin, and their accessibility. Payment is made, of course, only for space actually occupied.

The Metropolitan Life Insurance Company some years ago adopted the unusual but very practical plan of constructing its own warehouse building in Bronxville, New York, a suburban community about twenty miles from New York City. Under this arrangement no valuable space at the home office is needed for the storage of old records, but they are readily available in the company's own building if and when they are needed.

Most companies, however, store inactive records in their own offices. In this case the space used should be that which is the least desirable for general use. In every office there is space that has little or no natural light, or where the ventilation is poor. Such space may be effectively utilized by fitting it up as a storage room for inac-

tive records. Study of the existing layout and space occupied will usually reveal that there is room of the kind just described suitable for storage purposes.

**Equipment needed.** The matter of selecting the proper equipment for storage purposes is fully as important as finding a suitable place for it. In this connection the office manager must strike as nearly as is practical the proper balance between two extremes. It is a senseless waste of money, on the one hand, to invest in storage equipment of the same quality and type as that used for the filing of active material. On the other hand, the use of cheap, flimsy containers is equally poor economy. A primary consideration in connection with the transfer of records from the active to the inactive files is that the material, inactive though it may be, will be in perfect condition for use whenever the need may arise. It is, therefore, simply common sense, as well as good management, to use equipment of sufficiently high quality to safeguard adequately and properly the records stored therein. Durable and suitable transfer filing cases, especially designed for the purpose, are made by a number of reliable manufacturers of office equipment, and it is this type which the office manager should use for transfer purposes.

**Filing inactive material.** Last, but by no means least, careful consideration must be given to the method to be used in arranging the material in the inactive files. From observation of the method, or, more properly speaking, the lack of method, of a considerable number of concerns, the writer has no hesitation in saying that the chief point for the office manager to bear in mind in this connection is the fact that an archives department is not an enlarged waste-paper basket or a household attic. The proper storage of inactive records demands that the material be put away in an orderly and systematic manner, so that it can be found as readily and as easily as material in the active files. The practice of tying up inactive records in huge bundles and stacking them ceiling high in the storage space,

as often as not without even tag, or at best with one which is descriptive of the content of the package only in the most general way, is largely a waste of time and money. It may take a little more time to place the material carefully and in an orderly manner in transfer cases, marking each plainly with a label, but the results more than offset the effort. As a matter of fact, there is no good reason why it should not be just as easy to find inactive material as that which is active and, in all well-managed companies, this is the case. If the inactive records cannot be found when they are needed after they are stored, the money and effort expended in storing them has been wasted.

**Analyzing the work of the filing department.** The following questions indicate a method which the office manager may use to audit and analyze the work of the filing department. The list is intended, of course, to be suggestive rather than inclusive.<sup>7</sup>

1. What records are in the files?
2. Is each record necessary?
3. If more than one type of record is in a single file, what is the estimated number of each?
4. Are old records weeded from the files periodically?
5. What kinds of filing systems are used?
6. Are records cross-indexed? If so, how?
7. Are guide cards used, and in sufficient number? (One guide to every 50 records, approximately.)
8. What methods of requisitioning and charging out records are used?
9. Is responsibility for filing centralized, or are files handled by numerous employees?
10. Are files accessible to those who use them most?
11. Is the physical arrangement of filing equipment satisfactory?
12. Is fireproof equipment used?
13. Could five-drawer correspondence units be utilized in place of four-drawer units?

<sup>7</sup> Bengé, Eugene, *Cutting Clerical Costs*. McGraw-Hill Book Company, Inc., New York, 1931.

14. Are transferred records kept in such shape that they can readily be secured?
15. Is material kept in desks which should be in the files?
16. Are the employees who are entrusted with the maintenance of files competent?
17. Is filing equipment standardized?
18. Are files too full?
19. Are folders used unnecessarily?
20. Is a central filing department desirable?

## CHAPTER IX

### *Organization and Work of the Stenographic Department*

Evolution of dictation and stenographic methods. For many years the accepted practice in business offices was to furnish everyone of any importance with a private secretary and a private office. Junior executives who, as a matter of fact, had only a limited amount of authority in the organization were, nevertheless, dignified by these supposedly inalienable rights of the executive. In many cases, needless to say, neither of these pieces of "stage setting" were necessary or even desirable. Moreover, they were inevitably expensive.

Some twenty years ago the movement toward the centralized stenographic department began. Gradually, first one firm and then another began to see the desirability of transferring to a centralized typewriting department certain routine straight copying and typing work. Thus the private secretary who did not become a member of the centralized stenographic group was left with less work to do. Today, one may go into a very large number of concerns and find that only the chief executives and the more important members of the organization have private secretaries for their own exclusive use. The junior executive's former private secretary has become a member of a centralized stenographic department.

The invention and constantly widening adoption of the dictating machine has had an important influence on this



development. Where such equipment is installed, the usual practice is to supply each dictator with a dictating machine and concentrate the transcription work under the direction of a supervisor in a centralized transcription department.

**The private secretary.** From what has just been said, it should not be assumed that the private-secretarial arrangement is a thing of the past, nor that, under certain circumstances, it is not the most practical method of organization. Like the private office, certain executives are entitled to, and need, private secretaries.

The office manager is likely to have two principal responsibilities in connection with the private secretaries: First, he is expected to be reasonably familiar with the kinds of work which these employees can and should do; second, as chief personnel officer, he may be asked by one of the executive officers to assist in selecting a secretary.

**Duties of the private secretary.** A study made by Dr. Frederick G. Nichols of Harvard, in 1934, under the sponsorship of the American Institute for Secretaries, showed that secretaries themselves rank their duties in the following order of importance<sup>1</sup>:

Take dictation	Do employer's banking
Handle callers	Consult reference books
Transcribe shorthand	Supervise clerical workers
Write original letters	Prepare reports on business
Read and sort incoming mail	Handle follow-up files
Answer letters for employer	Take shorthand notes at meetings
Release letters for mailing	Use financial references
Organize office routine	Operate card indexes
Note information on letters	Make out itineraries
Organize filing systems	Operate clipping files
Keep personal accounts	Make out income tax reports
Make appointments	Make abstracts of articles
Sift and organize facts	Prepare copy for printing
Write minutes of meetings	

<sup>1</sup> Nichols, Frederick G., *The Personal Secretary*. Harvard University Press, Cambridge, Mass., 1934.

Dictate to a stenographer	Prepare mailing lists
Read proof	Do bookkeeping
Type from a dictating machine	Dictate to dictating machine
Act as librarian in office	Write speeches for employer

**Personal traits needed.** The same study revealed that the following personal traits, as ranked by both secretaries and employers, are essential to successful functioning in a private secretarial position:

**Intelligence**—Keen, high native intelligence, orderly mind.

**Accuracy**—Not in details alone, but in everything she does.

**Alertness**—To sense true import of situations; to anticipate needs; foresight.

**Memory**—For details, names, faces, places, and so on. Exceptionally retentive.

**Personality**—Good appearance, health, manners, and so on.

**Courtesy**—Innate; habitually courteous; especially in dealing with people outside the organization; the kind that creates good will.

**Tact**—In dealing with people under trying circumstances—subordinates, coördinates, superiors, and employer's clientele.

**Poise**—Self-control under stress. Not easily disturbed or thrown off balance by the unexpected.

**Adaptability**—Ability to adjust to her employer's attitudes and whims without becoming subservient.

**Judgment**—In handling people and situations. Deciding how and when to do a thing. Able to distinguish personal and business affairs of her chief.

**Efficiency**—Not only in handling details, but in handling more difficult tasks without waste of time or energy.

**Alertness**—As defined above.

**Resourcefulness**—Ability to meet emergencies; never at a loss to know what to do or say in difficult situations.

**Adaptability**—As defined above.

**Loyalty**—Able to give high degree of loyalty to her chief and his business.

**Faithfulness**—Especially in carrying out instructions and in looking after her employer's interests.

**Executive Ability**—Not only in directing detail work, but in acting directly for, or in place of, her chief.

**Initiative**—Does not have to be told what to do; goes ahead with her work unhesitatingly.

Practical application of the foregoing capacities concerning the duties and personal traits essential to success in secretarial work will help the office manager to carry out such responsibilities as he may have regarding the supervision and selection of these employees.

**Conditions in the average office.** An impartial study of conditions in the average office in which all stenographic work is decentralized or departmentalized is likely to reveal the existence of a number of uneconomical and inefficient situations.

If a time study were taken of the amount of work actually done by the various private secretaries in an office where such an arrangement exists, it would be found in most cases that there is a surplus of stenographers. In other words, the tendency is always to employ more stenographers than necessary. It may happen, for example, that there is more work in a given department than one secretary can handle, yet, when an additional person is hired, there is not sufficient work to keep both girls adequately employed. Furthermore, the inequality between the amount of work which every private secretary is called upon to perform varies widely between departments. Owing to the nature of the work, or to the habits of the department head, one girl may be kept extremely busy and, as a matter of fact, have more work to do than she can turn out. The girl in the next office, however, having a similar position, may have the problem of making five hours of work a day cover seven hours' attendance at the office. Naturally, such conditions lead to petty jealousies and charges of favoritism on the part of one girl.

It is also true that often the girls do not possess the same ability and training. Too frequently secretaries are judged by the department head at the time they apply for work on factors other than those of capability. The result is that one may find girls who are exceptionally well qualified for the work and others who are poorly trained receiving equal pay.

Perhaps the most important practical difficulty with the

whole private-secretarial arrangement is the annoyance to department heads when the secretary is absent on account of illness, vacation, or other causes. In such cases, it is necessary, under the private-secretarial plan, for the department head to make special arrangements to borrow someone

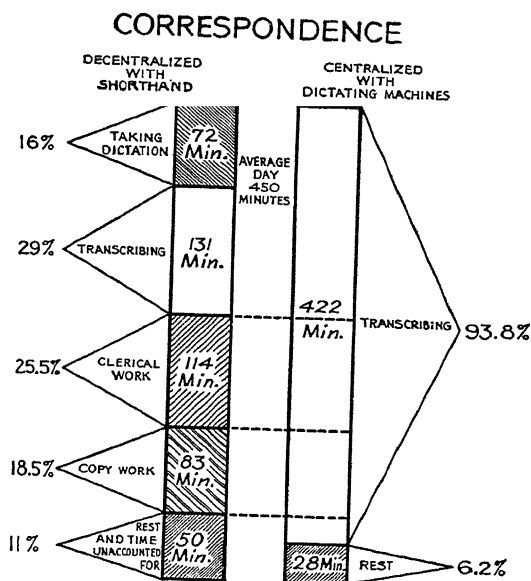


Fig. 64.—Comparative Time Required Under Centralized and Decentralized Methods.

else from another department temporarily, an arrangement which is highly unsatisfactory to both the department head and the employee.

Production and costs of centralized and departmental plans compared. The experience of the Dictaphone Company and the data which it has secured, based on hundreds of surveys made in large and small offices of all types of business, amply substantiate the foregoing comments.<sup>2</sup>

<sup>2</sup> Evans, R. B., "Dictating Machines Reduce Office Costs," *Annual Proceedings*, pp. 15-18. National Office Management Association, 1929.

As the charts in Figures 64 and 65 indicate, the average day comprises 450 minutes. Under the shorthand method the stenographer devotes, on the average, 72 minutes, or 16 per cent of her day, to taking dictation; 131 minutes, or 29 per cent, to transcribing from shorthand notes; 114 minutes, or 25.5 per cent, to clerical work; 83 minutes, or 18.5 per cent, to typing or copy work; and 50 minutes, or 11 per cent, for rest or unac-

## CORRESPONDENCE

### COMPARATIVE PRODUCTION

DECENTRALIZED WITH SHORTHAND	61.1 Lines per Hour (Including Time for Taking Dictation)
CENTRALIZED WITH DICTATING MACHINES	123.6 Lines per Hour   102.3% Increased Production

### COMPARATIVE COST PER 1000 LINES

DECENTRALIZED WITH SHORTHAND	\$9.91 per 1000 Lines
CENTRALIZED WITH DICTATING MACHINES	\$4.95 per 1000 Lines   49.9% Cost Reduction

### COMPARATIVE COST PER LETTER

DECENTRALIZED WITH SHORTHAND	\$ .121 per Letter
CENTRALIZED WITH DICTATING MACHINES	\$ .0714 per Letter   40.5% Cost Reduction

Fig. 65.—Comparative Production and Cost Under Centralized and Decentralized Methods.

counted time. Thus the stenographer's typewriter is in use 214 minutes, or 73 per cent of the day.

Under the dictating-machine method, these surveys show that the average stenographer's day consists of 422 minutes, or 93.8 per cent, devoted to transcription, and 28 minutes, or 6.2 per cent, devoted to rest. In about 92 per cent of the surveys from which these figures are taken, centralization of the transcription and typing work was found practicable. It was also found that in the majority of cases the clerical and copy work which the

shorthand stenographer was performing could conveniently be assigned to other clerical workers on a lower salary scale. Thus even assuming that an organization found it impracticable to centralize its transcription and typing work, it is clear that under the dictating-machine method the stenographer's productivity could be increased 20.8 per cent. In addition, as Figure 64 indicates, the typewriter is in use 422 minutes, or 93.8 per cent of the day, an increase of 97.2 per cent over the shorthand method, while the desk is in use 422 minutes a day, an increase of 26.6 per cent over the shorthand method.

Figure 65 shows the comparative production and costs of transcribed material. Under the shorthand method, including the time for taking dictation, the average production was 61.1 lines per hour. Under the dictating-machine method, the average was 121.4 lines per hour, an increase of 98.7 per cent. In computing the average lines per hour produced under the shorthand method, it should be borne in mind that the time the stenographer has devoted to copy work and to clerical work has been deducted. The average production per hour indicated for the dictating-machine method is a conservative figure.

The next section of the chart illustrates the comparative cost per thousand lines under the shorthand method and the dictating-machine method. In preparing these figures, only the stenographic labor cost, based on an average of \$25.00 a week, was taken into consideration. Under the shorthand method, a thousand lines cost \$9.91. Under the dictating-machine method, a thousand lines cost \$4.99, a reduction in cost of 49.7 per cent for accomplishing the same work.

Comparative stenographic costs per letter were also secured. One interesting feature found in the development of these figures was that the average letter dictated by the shorthand method contained 12.21 lines, whereas the average letter dictated under the dictating-machine method had 14.5 lines. This would seem to indicate either that through the use of the dictating machine, the dictator is influenced to express his ideas more fully, or that he becomes verbose. The records on which the surveys were based do not support the second supposition, but if such were the case, proper supervision, which is facilitated by the dictating-machine system, would soon remedy this situation. Based upon the average lines per letter, the average cost per letter under the shorthand method was \$.121; under the dictating-machine method, the average was \$.0724, or a reduction of 40.2 per cent below the shorthand cost.

**Advantages of a centralized stenographic department.** Among the advantages accruing to an organization that establishes a centralized typing and stenographic unit are these:

1. The surplus of workers in each department is reduced, and the surplus in the central department is increased, providing an organization for handling peak loads.
2. Work is properly assigned according to class of work.
3. The work is equally distributed.
4. Less time is wasted.
5. Wages are consistent.
6. Definite standards are maintained; uniform quality and style of work will reflect credit on the firm.
7. There is no distracting noise; typewriting is isolated from executives and clerical workers.
8. All stenographers receive better training.
9. Work is not held over in the absence of a stenographer, as her work is done by others.
10. Stenographers are familiar with each dictator's style and dictation—not just with that of one.
11. There is a continuity of work—the work is not affected by the coming and going of the personnel of the central department.

**Disadvantages of the centralized plan.** There are, however, certain possible disadvantages of a centralized stenographic arrangement. These may be summarized as follows<sup>3</sup>:

1. It often arouses some antagonism during the organization period.
2. Department heads may complain about impromptitude and inaccuracy of work done for them.
3. Extra stenographic and typing tasks, which would otherwise not be done, may be thrust upon the central department.
4. Dictators often request that certain stenographers be assigned to them.
5. Dictators tend to have stenographers perform filing and clerical tasks for them.
6. Requests for immediate performance may interfere with proper handling of work.

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<sup>3</sup> Bengé, Eugene, *Cutting Clerical Costs*. McGraw-Hill Book Company, Inc., New York, 1931.

7. The time of a supervisor, whose direct production necessarily may be little or nothing, must be charged against the work done.

**Factors to be considered in organizing.** There are a number of important factors that merit careful consideration in organizing a central transcribing department.

Preferably a location should be selected that is quiet and well lighted, and which will permit the concentration necessary for good work. A room housing only the centralized transcribing department is, of course, ideal. In lieu of this, the department should be located in the general office as far away as possible from the traffic through the office.

One of the most important matters that the office manager must consider is the selection of the person who will act as head stenographer or supervisor. Since the head stenographer is the point of contact between the dictators and the stenographers, she must obviously be the kind of person who can command the respect of both. Furthermore, it is highly desirable that she be familiar with the nature of the work done in the various departments and the relations between them.

The question of whether it is necessary or desirable for the supervisor to be a stenographer herself is an open one. In some companies head stenographers are selected very largely on the basis of their personal and executive ability, while in other concerns a knowledge of stenography is considered essential. Personally, the writer is of the opinion that a knowledge of stenography is not absolutely necessary, but rather that executive ability is the primary qualification.

All members of the department should be trained to handle every type of work that is sent to it. The necessary time and effort to do this will be more than repaid by the smoothness with which the department will operate, despite absences due to illness and vacations.

Generally, the best girls should be assigned to machine transcription, the next best to stenographic, and the least



competent to the copy work. Copy work is normally assigned to girls who have been typists, although the typing they will do is, of course, by no means to be confined to that of the department from which they have been transferred.

The reasons for the assignment of the best girls to machine transcription merit a word of explanation. In transcribing shorthand notes, stenographers have two advantages over dictating-machine operators. First, the stenographer reads with her eyes, the dictation machine operator must read with her ears—and since most persons get a much more definite impression through the eye than through the ear, the stenographer has a natural advantage. Furthermore, the stenographer has not only heard the dictation once, but has had an opportunity to ask questions, while the dictating-machine operator, listening to the cylinder, is hearing the dictation for the first time. She must be keener, have a better background, a better power of concentration, and initiative and courage enough to write good sense and good English no matter what she may think she hears from the cylinder.

Much depends on the collection and delivery system—the collection of cylinders and folders in the case of a dictating-machine installation, and the delivery to the dictator of both dictating-machine and shorthand transcription. Collection of cylinders from dictators' desks, or from a central station in each department, should be made at least hourly. It may even be advisable to have half-hourly collections in the early afternoon. The messengers assigned to this work should see that the dictators are supplied with cylinders at all times, and that the transcribed cylinders are collected from the operators' desks promptly.

**A practical way to get started.** One practical and simple way to introduce the organization of a centralized stenographic department, particularly in a company where there may be some opposition, is to start on a small scale with a few departmental stenographic workers, guaranteeing to

serve satisfactorily the departments from which they are taken. Sometimes the work of the departments is such that two or three or more of them have extra work which their regular employees cannot handle and they are asking for additional personnel. If this is the case, the office manager may find it possible to establish the centralized department by employing one or two people to handle this work, but who are to do it under his direction and not under the jurisdiction of the individual department heads.

In either case the idea must be carefully and fully sold to the department heads affected before any step is taken to put it into force; otherwise only animosities and ill feelings can result. Moreover, the office manager should do everything in his power to be sure that the service rendered by the newly formed stenographic section will be beyond question, from the standpoint of time taken to do the work and the quality of the production. With such a start, and assuming that the service given is satisfactory, the office manager can gradually enlarge the typing and stenographic unit as other department heads are sold on the idea and as they are willing to transfer workers to the new department. Eventually a fully functioning centralized typing and stenographic department will have been created and will be accepted by everyone in the organization as a matter of course.

**Control of stenographic activities through records and reports.** The usual plan upon which a centralized stenographic department operates is to send out first the girl having the least amount of unfinished work ahead to take additional dictation when a call comes in. In order to put this principle into practice, however, the head stenographer must have records and reports, regarding the work of each individual employee, that will tell her at all times the amount of work each girl has completed and the amount that remains unfinished.

One simple method of securing this information is to have each stenographer report to the head stenographer,



**Control of tone of correspondence.** The establishment of a centralized stenographic department obviously facilitates the control of both the tone and the mechanical make-up of letters. Limitations of space will not permit a discussion here of business correspondence. It is important to remember, however, that letters are in a sense the personal representatives of the company in the eyes of their recipients. Consequently, care should be taken in their

Name		Date	
Kind of Work	Amount Done	Time	Remarks
Dictation			
Transcription			
Proof Reading			
Copy Work			
Special Work			
Idle Time			
Personal			

Fig. 67.—Stenographer's Daily Report of Work Done.

preparation, both as to tone and word choice, and from the standpoint of their physical appearance. The well-known adage, "Every letter a sales letter," contains a great deal of truth and is something which every writer of business letters should bear in mind constantly.

**Correspondence manuals.** In large organizations, where the number of dictators and stenographers is such that it is desirable to standardize on both the mechanical make-up and the content of letters of a more or less routine character, the use of correspondence manuals is of distinct advantage.

By means of such manuals the mechanical make-up of a letter can be standardized. Some of the points to consider in standardizing the form of letters are the date, subject, address, salutation, line spacing, paragraphs, sentences, margins, numbers, quotations, signatures, complimentary

close, second-sheet headings, identifying initials, and carbon copies.

When a large volume of correspondence is of a routine nature, form paragraphs and form letters are often used to advantage. In preparing form letters, the first step is to analyze and classify routine situations. The office manager, or a specialist employed for this purpose, then prepares a set of letters which, with the appropriate references to the particular letter being answered, such as the name, date, and so on, can be used over and over again. Thus the person to whom the letter is sent feels that he or she is receiving a personally dictated letter. Such letters, of course, are not processed letters, but are merely forms which the typist copies.

In cases where it is not possible to write a form letter which will fully cover every situation, a series of form paragraphs may be prepared for use by the correspondents and dictators. Each such paragraph is numbered. The correspondent, in answering a letter, indicates the paragraph numbers to be used. The typist, in answering the letter, merely refers in her copy of the correspondence manual to the form paragraphs as marked by the dictator and copies them in the order given.

**Incentive compensation plans.** In recent years an increasing number of companies have established wage systems based on the amount of work produced. Such plans have been especially widely adopted in connection with the work of centralized stenographic and transcription departments. This important part of the organization and operation of the stenographic department is treated in Chapter XXIV.

## CHAPTER X

### *Organization and Work of the General Service Units*

**Relation of the office manager to service activities.** Previous chapters have emphasized the importance of the work of the office manager as a service executive. Filing and stenographic services have already been considered. There remain, however, a number of other equally important activities, including mailing and messenger service, telephone information and reception service, duplicating service, and the storage and issuance of office supplies. This chapter is devoted to a discussion of these matters, which together constitute a group of the most important functions for which the office manager usually is responsible.

**The mailing department.** Someone has aptly described the mailing department of a business organization as the extension of the United States Postal System into the business house itself. As a matter of fact, a company mailing department is both the first and the last point of contact between the firm and its customers with whom it deals by mail. A well-organized mailing department finds many opportunities for rendering constructive service. Unfortunately, however, the department also may be a source of loss rather than profit. Statistics show that every year American businessmen throw into the fire—postal loss—over \$10,000,000. At least 95 per cent of this tremendous sum may be traced directly to ignorance of clerks and others in the mailing department. No matter how effectively

post-office employees may do their work, such mistakes as incorrect addresses, insufficient postage, unsealed first-class mail, and other similar errors due to carelessness are the direct responsibility of the company itself. The practice, therefore, of placing young and inexperienced employees in the mailing department on the assumption that they are good enough for such work is apt to be an expensive policy.

**Methods of handling incoming mail.** The handling of mail is almost always centralized. Even in the small office the single office boy usually handles all the mail.

The procedure followed in handling incoming mail in the average company may be summarized as follows:

1. The mail is obtained from the post office by a company messenger, or delivered to the company by the letter carrier. Large companies usually find it desirable to have their own messengers call at the post office to secure the mail.

2. Upon receipt in the mailing department, all mail, except that marked "Personal," is opened. Practice differs with regard to the manner in which personal letters are handled. Many of the larger companies discourage subordinate employees, either directly or indirectly, from receiving personal communications in the office, some going so far as to redirect such letters to the home address of the employees as soon as they are received. Other organizations, however, feel that since the total volume of employees' mail is but a small fraction of the entire amount received, the easiest way, everything considered, is to handle employees' personal mail in the same way that company letters are taken care of.

Letters addressed to specific individuals occupying executive positions in the company may or may not be opened by the mailing department. Some organizations have a rigid rule that all mail, no matter whether it is addressed to the company or to an individual, shall be opened in the mailing department. This plan is followed on the assumption that a large majority of the communications received

deal with company business and that, consequently, all mail should be examined in the mail room first so that it can be routed to the right department or individual. The majority of companies, however, have mail which is addressed to individuals delivered directly to them unopened, on the assumption that a considerable number of such communications may be of a confidential nature. While no great harm can come, perhaps, from having them hastily scanned in the mailing department to determine to whom they shall be delivered, occasionally matters might be seen by subordinate employees about which it might be better that they did not know, for one reason or another.

Mail is opened either by machine or by hand, depending largely on the volume of work to be done. As stated in Chapter VII, both hand operated and electrically operated mail-opening machines may be bought, depending upon the volume of mail.

3. As soon as the letters have been opened, all those containing checks or cash may be put into a separate pile for direct delivery to the cashier's department, or the money may be detached and a notation made on the face of the letter stating the amount enclosed. If the latter method is followed, it is necessary to have one or more clerks in the mailing room enter, on designated forms, the names of customers from whom money has been received, together with the amounts enclosed.

4. As the letters are opened and those containing remittances disposed of in one way or another, they are sorted by departments, sections, and, in certain cases, by individuals. Practice differs widely, but in a large concern the mailing department will sort only by main departments or sections, except when letters are addressed specifically to certain chief executives. Racks or large circular bins may be provided for sorting mail. Figures 68 and 69 illustrate two types of racks used in sorting mail at the home office of an insurance company. Some companies make a practice of time-stamping all incoming mail as it is sorted.



5. After the mail has been sorted by departments, it is ready for delivery by messengers to the various departments. Since it is highly desirable that all the steps outlined above shall have been performed and completed by



Fig. 68.—Mailing Department of an Insurance Company. *Courtesy of Metropolitan Life Insurance Company.*

the time the office opens, it is the usual practice to have certain members of the mailing department arrive somewhat in advance of the regular office hours.

**Methods of handling outgoing mail.** Outgoing mail is usually handled as follows:

1. The messenger department collects outgoing mail periodically from the outgoing-mail letter trays or baskets on the desks in the various departments. The organization of this activity is discussed in a subsequent section.

2. As outgoing mail is received in the mailing room, it is folded, inserted in envelopes, sealed, and stamped. Sometimes enclosures, such as booklets or return reply

cards, must be enclosed. Particular care must be taken to be sure that all enclosures that are to accompany the letter and the envelope are actually enclosed. Large mailing departments use sealing and stamping machines, oper-



Fig. 69.—Mailing Department of an Insurance Company. *Courtesy of Metropolitan Life Insurance Company.*

ated by hand or electrically, such as those described in Chapter VII. The folding and sealing of all mail, whether by machine or by hand, must be done carefully and neatly, so that when the letter arrives and is taken from its envelope by the recipient, it makes a good impression and does not show signs of carelessness or hasty work.

Outgoing mail should be coördinated as closely as possible with airplane, train, and boat schedules. The head of the mailing department can easily find out from the post office the closing hour for mail which is to be sent by a certain train, boat, or plane. Schedules showing the time at which letters must leave the company mailing department in order to meet these closing times should then be prepared and posted in a conspicuous place in the mail-

ing room. If this practice is followed, letters will reach their destination promptly.

For selfish reasons, if for no other, as much of the outgoing mail as possible should be dispatched early in the day. To this end, periodic collections of outgoing mail should be made from the various departments in the office during the forenoon, and a preliminary outgoing mail should be sent not later than noontime. After this, outgoing mail should be sent away at least every two hours. In this way the inevitable peak load which comes toward the close of the business day may be somewhat reduced.

**Mailing-department methods of a publishing company.** The foregoing sections have described the methods of handling incoming and outgoing mail in the average business office. In a number of lines of business such as publishing, mail order, and broadcasting, for example, the mailing problem is of more than ordinary importance, because of the exceptionally large volume handled. The practices of a well-known publishing company offer an excellent practical illustration of what is involved in such cases. Some idea of the size and importance of the mailing department in this company may be gained from the fact that in a recent year the department mailed out something over 7,000,000 pieces of mail matter, and that between twenty-five and thirty-five people are regularly employed in the department.

The department handles two major classes of mail matter. First, there are the "direct mail" pieces, which consist of letters, circulars, booklets, and so on, sent out by the company to promote its own business. The volume of this work constitutes approximately two-thirds of the total volume handled by the department. Second, one of the departments of the company sells an addressing and mailing service to other organizations. The company does not sell lists of names, as such, but it does sell the use of these lists. Consequently, the addressing and mailing operations are necessarily done by the seller. For this service the buyer

is charged on a per thousand basis, in addition to the charge for the use of the list. The mailing department also handles all first-class outgoing mail matter written by the various members of the organizations. The number of pieces of mail matter of the last kind ranges between 1000 and 2000 per day.

To handle this volume of work, the department employs an average of five mailers, ten typists, seven messengers, three mailing-machine operators, one folding-machine operator, two first-class mail clerks, and two general office boys, all of whom are under the direction of the supervisor and the assistant supervisor.

The routine followed in the daily work of the department begins when the necessary lists of names to be copied are secured, together with a stock of the material that is to be sent out on the list. In case the lists are used to promote the business of the company itself, the names of prospective customers are kept on cards in the sales-promotion department. When a given list is to be circularized, the trays, each containing approximately 500 cards, are sent to the mailing department. From these cards typists address the envelopes. While the envelopes are being addressed, the necessary letters, circulars, postal cards, booklets, and other enclosures are ordered from the stock room and placed in the mailing department ready for use. When the typists have finished typing a sufficient number of envelopes, the mailers start the work of enclosing the material which is to go out on that particular mailing. This mailing operation consists of folding the material, collating it, and enclosing it in envelopes. As fast as this operation is completed, the envelopes are passed along to the postage meter machines, where they are stamped and sealed. All card lists are kept on both an alphabetical and a geographical basis; consequently, it is possible to zone by states and postal routes all material as it leaves the postage meter machines. Bagging the mail is the work of the general office boys, who are also responsible for deliver-

ing it to the loading platform, where it is taken by trucks to the post office.

The authority to proceed with a given mailing is contained in a "mailing order" which gives specific, detailed instructions of exactly what is to be done—what material is to be enclosed, what list is to be used, when the mailing is to be made, and so on. The mailing order is made out in duplicate and signed by the person authorizing the mailing. The original copy is sent to the mailing department, the duplicate being retained in the sales-promotion department for follow-up and future reference.

Machine work has been substituted for hand work wherever it has been found practical to do so, as the volume of work fully justifies such an arrangement. As stated above, automatic stamping and sealing machines are used. A folding machine, capable of making any of the so-called standard folds on letters, circulars, and so on, at the rate of 5000 or more an hour, is also a part of the machine equipment of the department.

**Mailing methods of the Doherty Company.** The organization and work of the mailing department of Henry L. Doherty and Company, as described by Mr. Allen Everett, manager of the Planning Department, is interesting from the point of view of both routine and peak-load operation. Mr. Everett says, in part<sup>1</sup>:

During the past two or three years the volume of incoming mail has averaged 35,000 pieces per month. Prior to that, because of a policy of monthly dividend payments, and, of course, during a period of greater business activity, the monthly average was more than 1,000,000 outgoing pieces.

The plan for handling routine mailing work is simple. A post office box is rented and all incoming mail is held in bags at the post office. Boys call for the mail hourly, beginning at 7:30 A.M. and continuing until 4:30 P.M. The bags are brought to the central location where a preliminary sort is made. All personal mail is delivered intact to the individual at hourly

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<sup>1</sup> Everett, Allen, *Office Machines and Methods*. American Management Association, 1935.

intervals by boys on regular inter-departmental routes. All company mail is opened by members of a specially trained unit in the general files division, which is a part of the service department. Letters containing checks or negotiable papers are immediately delivered to the cashier's department. Notation as to contents, sender, and so on are made on the envelopes, and these are retained by the files division for a period of six weeks as evidence to assist in tracing a misplaced or lost payment.

All other mail is divided into two general categories: the correspondence that is routine, and the correspondence of certain departments, more technical in nature, such as financial, legal, engineering, operating, and so on. Mail in the first category is delivered to the department concerned, immediately. Mail in the second category is indexed before delivery. The indexing is done on small slips 4 inches by 2½ inches in size. On these slips are noted the names of sender and addressee, the date and the subject. All outgoing correspondence from this group of departments is also indexed. The index on outgoing correspondence is prepared from an extra copy made expressly for the use of the filing unit. The indices are referenced, and thus the complete file on any subject can be located. Just as soon as correspondence is indexed, it is delivered to the proper department and individual.

Messenger boys make regular hourly trips on departmental mail routes. They not only deliver incoming mail, but also pick up outgoing mail, including inter-office letters and memos and letters to be mailed to the outside. All of this material is taken to the central unit, where it is sorted. Inter-office material is dispatched via the next mail route. Letters to be mailed outside are sorted into two classes, that is, correspondence to allied companies, and letters to other companies or individuals. All correspondence to allied companies is sent to the mailing unit unenclosed, sorted there as to companies, and near the end of each day posted in a single large envelope to each company with the consequent savings in postage. Other outgoing mail, already enclosed in envelopes, is passed through a postage meter machine and sent to the post office at convenient intervals, as sufficient volume accumulates.

Foreign mail is hand stamped with proper postage, as is special domestic mail, when it is desired to have the envelope show a regular postage stamp instead of the machine indicia mark. The stamp supply is under proper control and custody, as are the postage meters. All outgoing mail from each department is accompanied by a small form showing number of letters,

packages, and so on, the account charged, and the signature of the individual authorized to order postage.

It is important for those responsible for the mailing operation to keep abreast of all changing postal regulations, in order that they may inaugurate mailing economies and maintain pleasant relations with postal authorities. The latter is an important factor, particularly during peak-load special mailing operations, when it is essential to have every bit of help and coöperation possible from the post office departments to facilitate fulfilling schedules.

### How peak-load operations are handled.

The routine mailing operation just described is easily susceptible to accurate planning, handling, and control. The occasional peak-load operation, however, presents a problem not so easily solved, especially where a time limit is involved and where the volume runs into several hundred thousand pieces. Jobs of this nature include such work as the mailing of notices of the annual meeting to stockholders and the enclosure of proxies, mailing financial reports and special letters to stockholders, distribution of advertising letters or material, and so on.

The problems encountered in sending over 600,000 proxies to stockholders for the annual meeting illustrate what is involved in such cases. The date for the record of stockholders is March 15. On the average, all proxies must be in the mail by April 6 in order to be in the hands of stockholders the required length of time before the meeting. Between March 15 and April 6, the stockholders' books must be closed and balanced, the proxies addressed, the number of shares inserted and checked, duplicates eliminated, follow-up stubs filed, proxies inserted in window envelopes, sorted and mailed. It generally happens, even though schedules are carefully planned and balanced, that only from five to six days can be allowed for the work of the mailing division, which includes insertion, sealing, sorting, binding, bagging, and mailing. The sorting and binding operations are necessary to take advantage of a postage regulation permitting identical mail to go at the rate of 12 cents per pound (but not less than 1 cent per piece). This means a saving of 2 cents per piece, which for 600,000 pieces amounts to a gross saving of \$12,000.

Briefly, the entire operation consists of the periodic delivery throughout the day of proxies, which have been previously addressed by automatic machinery, to a unit of the mail division for insertion in window envelopes. This is done by automatic

machines which seal the envelopes in the same operation. The envelopes then go to a sorting unit, where they are segregated in a series of racks according to states and towns. When this is complete the batches for each town are bound by an automatic tying machine. Thence they are placed in post office mail bags, and weighed; a count is calculated from a pre-determined figure of pieces per pound, in which the Post Office has concurred, and delivered to the post office, together with a statement showing weight, count, and so on. Postage is not necessary, since a permit indicia has already been printed on the envelopes and a credit has been established at the post office against which the postage cost of each bag of mail is charged.

### Automatic equipment used.

Machines are used for inserting enclosures in envelopes. These machines have hoppers which provide for a maximum of four enclosures. If the envelope is too thick, denoting more than the required number of enclosures, or if the envelope is too thin, showing less than the required number, the machine automatically stops. These machines average from 2800 to 3000 single enclosures per hour. The cost of machine enclosing is just about one-half of that for hand enclosing, considering labor costs alone.

Wooden racks containing pigeonholes of convenient size are employed for sorting. The racks are five compartments high and six wide. Generally two are hinged together along their vertical edges and placed in a V shape on tables. The operator works in the angle of the V, so that all pigeonholes are within easy reach and physical effort and motion are reduced to a minimum. This equipment is a combination of standard inexpensive tables and wooden racks, which any carpenter can build quickly.

In our company 40 per cent of all addresses are within five states. Consequently a preliminary sort is made for these five states. We have also found that a majority of the addresses are in a relatively few large cities in each of these states. Therefore, a second sort is made by principal cities. The sort is then continued by planned steps along these lines until the ultimate breakdown is achieved. Sorting racks and pigeonholes are arranged and labeled to conform with this system, which permits rapid and efficient work.

After letters are sorted, mail going to each town must be tied up separately. This is accomplished by a tying machine, which



is a sturdy piece of apparatus, electrically driven, having a platform about waist-high. The twine is bound around in two directions by turning the bundle. These bundles are then dropped into post office mail bags held upright with throats wide open by the usual frames. When each bag is full, it is closed and weighed and sent to the post office, together with a form showing weight, calculated number of letters, and so on.

**Methods of reducing mailing costs.** Since the advance in postage rates that took place a few years ago, increased attention has been given to methods of reducing mailing costs. By no means should it be assumed, therefore, that the entire duty of the mailing department has been discharged when it has properly handled the routine and special work in some such way as outlined above. There are a number of very real and worth-while economies which a well-organized mailing department can effect. Some of the more important of these are outlined below.

**Regulations and suggestions applicable to first- and third-class mail.** Obviously the first step in any practical plan to reduce mailing costs is a thorough knowledge of the postal regulations. Some of these, which are applicable to first- and third-class mail, are summarized below, primarily for the purpose of indicating the numerous technicalities and details involved.<sup>2</sup>

### First-class matter.

First-class mail is written matter, or matter sealed against postal inspection. It includes hand or typewritten (including automatically typed) letters, post cards, and carbon copies; also all matter wholly or partly in writing, whether sealed or not (except manuscript copy accompanying proof sheets), and material of any type enclosed in business reply envelopes. Rates for first-class matter are as follows:

Letters for Local Delivery . . .	2¢ per oz.
Letters for Non-Local Delivery . . .	3¢ per oz.
Postals and Post Cards . . . . .	1¢ each
Business Reply Envelopes for . . .	2¢ per oz., plus 1¢ for each
Local Delivery . . . . .	letter
Business Reply Envelopes for . . .	3¢ per oz., plus 1¢ for each
Non-Local Delivery . . . . .	letter

<sup>2</sup> *U.S.E. Mailing Guide.* United States Envelope Company, Springfield, Mass.

### Types of postage.

Adhesive stamps or metered indicia may be used. Adhesive stamps for first-class may be of the precancelled variety if special authority is secured. Metered indicia for first-class

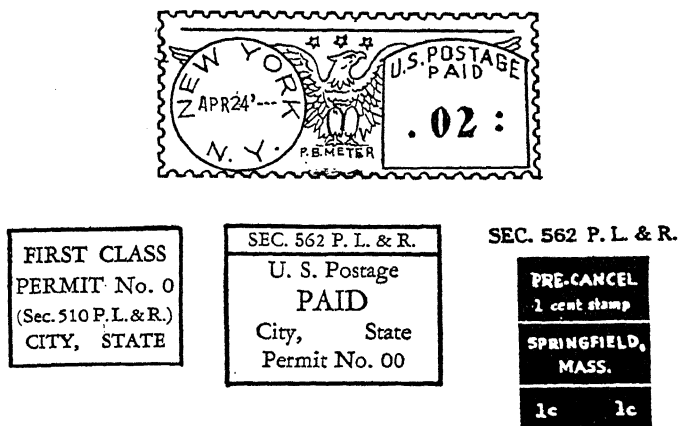


Fig. 70.—Four Types of Postage Indicia.

matter must show the amount paid in postage, permit number, name of post office, and date of mailing. The indicia may be in any color, including red. The mailing must be deposited, with a statement of the number of pieces, in the post office or authorized collection point.

### Conditions governing use of window envelopes.

The window may be used only for displaying name and address of addressee and must be parallel with the length of the envelope. Only one window (or opening) is allowed. The window must be at least  $1\frac{3}{8}$  inches from the top and  $\frac{3}{8}$  inches from the bottom and sides of the envelope. The window envelope must bear a complete return address, including street and number or post office box. No printing within  $\frac{3}{8}$  of an inch of the window is allowed except a plain, narrow border not over  $\frac{5}{32}$  of an inch in width. The same type border also is permitted around the outside edge of the envelope. All stationery mailed in window envelopes, as well as the envelopes themselves, must be of white or a light tint or shade.

### Business reply envelope forms.

Collect-on-delivery, or business reply envelopes, are allowed. Two permissible forms are shown in Figures 71 and 72.

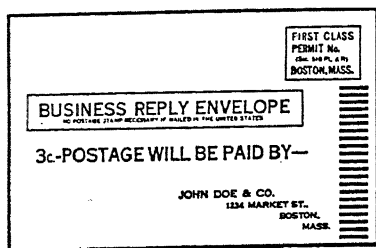


Fig. 71.—One Form of Business Reply Envelope.

Concerns with branches or dealers who desire to distribute business reply envelopes from their main office to be returned to various dealers or branches may do so either under permit obtained at each of the offices to which envelopes are to be returned, or under one permit issued at the post office where the main office of the company is located.

### Third-class matter.

Third-class mail is printed matter and other mailable matter weighing eight ounces or less. "Printed matter" includes:

A. Single copies of straight printed matter (not reproductions of typewritten or handwritten matter). The rate is  $1\frac{1}{2}$  cents for each 2 ounces or fraction thereof. Stamps or postage meter machine without date line may be used.

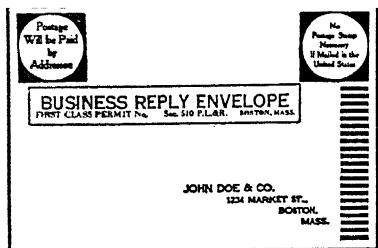


Fig. 72.—Another Form of Business Reply Envelope.

B. Twenty or more copies of printed, multigraphed, mimeographed, or otherwise reproduced circulars, including reproductions of handwriting. The insertion of handwritten, typed, or stamped date and names of addressee and addressor is permitted. The rate is  $1\frac{1}{2}$  cents for each 2 ounces or fraction.

Regular or precancelled stamps, postage meter machine, without date line, or printed non-meter indicia may be used.

C. Two hundred or more, or 20 pounds or more, of mail otherwise like (B) may be sent under bulk rate, if the mailer has a permit, and if the mail is sorted and faced for states and for all post offices receiving fifteen or more pieces. The rate is 12 cents per pound, but not less than 1 cent per piece. Precancelled stamps, printed non-meter indicia, or postage meter machine without date line may be used.

D. Books and catalogs of less than twenty-four pages and those

having twenty-four pages or over (twenty-two of which are printed) and weighing 8 ounces or less each. The rates for single copies are 1 cent for each 2 ounces or fraction, and 8 cents per pound for 200 or more copies or 20 pounds or more, but not less than 1 cent per piece. The mailer must have a permit, and the mail must be sorted and faced for all states and all post offices receiving fifteen or more pieces. Precancelled stamps, printed non-meter indicia, or postage meter machine without date line may be used.

Merchandise, books and other articles, except circulars and miscellaneous printed matter, if weighing less than 8 ounces, may be sealed if the package carries the printed statement, "Postmaster: This parcel may be opened for postal inspection if necessary," and the return address of the sender is written or printed. The return and forwarding of third-class mail requires postage anew. Return of undeliverable third-class mail may be secured by printing upon the face in connection with the corner card a guarantee of postage payment. The forwarding address of third-class mail may be secured by printing in the lower left-hand corner, "Postmaster: If forwarding to a new address, notify sender on Form 3547, postage for which is guaranteed." Advertisers using Form 3547, however, should avoid annoying prospects who may have changed residence and left a forwarding address, by wording inscription as follows: "Postmaster: In case of removal, do not notify addressee but hold matter and state on Form 3547 amount of forwarding postage required. Forwarding postage and postage for notice guaranteed." If this is not done, the prospect must pay the cost of forwarding postage on delivery—a fruitful source of ill-will.

**Other suggestions for reducing mail-handling costs.** Aside from savings to be secured through a thorough knowledge of the postal regulations, there are many other ways in which mail-handling costs may be reduced.<sup>3</sup>

1. Many firms send out collection letters and inclose stamped return envelopes. This is a wasteful practice, for only a small percentage of these envelopes are ever used. Business reply envelopes should be used whenever possible. One central permit number allows the use of these envelopes by branch offices and even permits distribution outside of the mail. A customer simply

<sup>3</sup> Adapted from Rogers, Donn E., Burroughs Adding Machine Company, "Twenty Plans That Cut Mail Handling Costs," *Management Methods*, June, 1933. McGraw-Hill Publishing Company, Inc., New York.

drops this envelope in the mail without affixing postage. When the letter is returned the post office collects the regular three cents postage plus one cent for the reply privilege. The only time it is more economical to send stamped envelopes is when a return of 75 per cent or better is expected, as one hundred stamped envelopes cost three dollars and seventy-five returned C. O. D. envelopes cost the same.

2. Important rush mail should be separated from routine correspondence and marked for special attention in the mailing department. This mail should be handed to the city post office dispatch clerk for a definite air-mail or train-mail closing. If the letter reaches its destination during the night, it will be delivered early the following morning. However, if it reaches its destination during the day, it should be stamped "SPECIAL DELIVERY" to insure delivery that same day. Rush letters separated and delivered to the post office for definite mail closings will be accorded special attention even during rush hours.

3. Many firms have branch offices throughout the country with which they correspond regularly. The parcel-post zones are fixed for each one of these branch offices. The parcel-post zone can easily be placed on either a printed or an addressographed label in advance of the mailing. The shipping clerk is then able to zone the parcel at a glance without referring to either a chart or a postal guide. When the shipping weights are constant the postage to each agency or branch office may be predetermined and placed on a small chart for ready reference.

4. All important letters sent by air mail should be confirmed. Mail planes are sometimes forced down and air mail delayed. Copies of letters sent to any branch office should be sent with the regular daily mail dispatch to that agency; if confidential, they should be enclosed and sealed in a "no postage" envelope. Copies of air-mail letters sent to those outside the company should be sent by regular first-class postage.

5. Large corporations maintaining sales and service branches frequently receive mail from their representatives that either is short of postage or bears an excessive amount. The post office exacts an additional penalty in the case of short-paid letters, which is collected when the letter is delivered. Each agency should be instructed to test its postal scales, setting them accurately before weighing the day's mail. The short-paid envelopes received at headquarters should be returned to each office manager with instructions to check the outgoing mail more carefully to avoid such waste in the future.

6. Firms sending out material under a post-office permit

usually print up a large supply of envelopes in advance. A slight variation in weight or a change in mailing regulations may change the printed postage rate. It is not necessary to destroy the surplus supply of these envelopes. Print gummed stickers indicating the new rate and affix them the same as postage stamps. Care must be taken to place the sticker so that it completely obliterates the old indicia.

7. Storing envelopes in a warm, dry room causes the gummed flaps to curl. This makes sealing difficult, particularly when the envelopes are to be sealed by machine. A shallow pan of water should be placed over each tier of envelopes to provide sufficient moisture to prevent the envelope flaps from curling inward.

8. A letter enclosed in a package subjects it to the higher or first-class postage rate. This same letter may be stamped and fastened to the outside of the package and the package itself mailed as parcel post. Both the package and the letter must bear complete addresses. This plan can be put into effect by gumming the back of one hundred envelopes and marking each one "FIRST CLASS." It is then a simple matter to insert the letter, moisten the gummed surface, and affix the envelope to the outside of the package. In this connection, however, it is well to remember that the package and letter travel as parcel post, which is considerably slower than first-class mail.

9. Many firms insure their valuable parcel-post packages with private insurance companies. Such packages should never be marked "INSURED" to indicate private insurance. The parcel-post regulations permit this marking to indicate government insurance only.

10. Many firms keep large supplies of addressed envelopes ready to send to their branch offices. If the address of a branch is changed, it is not necessary to destroy the stock of envelopes containing the old address. Print the new address on gummed labels and paste them over the old address.

11. Small mailers usually designate some inexperienced file clerk or office boy to stamp and dispatch their mail. These duties are often performed in a hurried, haphazard manner. Although the office manager would never think of giving this clerk a fifty-dollar petty cash fund, he unhesitatingly gives him the equivalent in postage stamps. The responsibility for the proper weighing and stamping of mail should be delegated to a clerk who is especially trained for this important work.

12. Large mailers seldom question their annual postage bills. If the amount is unusually large they hold a hurried consulta-

tion and decide to operate immediately on their advertising budget. A more careful diagnosis would probably lead to an intelligent analysis of mailing methods. Such an analysis should include: (1) checking each class of mail to determine the lowest and most advantageous postal rates; (2) revising the stamp accounting system to control stamps and show clearly, day by day, stamps purchased, stamps used, and stamps on hand at the beginning and end of the day; (3) giving proper publicity and attention to constantly changing mailing regulations and training mail clerks so that they may understand and apply them correctly; and (4) checking the possibility of securing more modern and efficient mailing equipment.

From the foregoing it should be entirely clear that the organization and operation of a mailing department is by no means a simple task, especially in a large company. Knowledge of a large number of detailed technical postal regulations is essential. Accuracy, thoroughness, and initiative are qualities which every employee of the mailing department must possess. The office manager who allows his mailing department to be manned largely by inexperienced and untrained personnel, on the assumption that "anybody can take care of the mail," makes a serious and costly mistake.

**Organization and work of the messenger service.** With relatively few exceptions the type and appearance of messengers employed in the average concern, as well as the organization of their activities, is, unfortunately, nothing of which business houses may be proud. Like the mailing department, it is too often thought that anyone can be a messenger and that the messenger department should serve as a training school for all new employees. While it is true that the work which the average messenger performs does not require great ability, it is also true that the first impression that a company makes on visitors is often the result of contact with a member of the messenger department. Consequently, messengers should be selected on the basis of their personal cleanliness and appearance, as well as for their mental and physical ability to do the work.

Courtesy, both to company visitors and to other employees, and a sense of responsibility should be emphasized. The fact that a messenger's position is often merely an entering wedge from which promotion to a better-paying position comes should be constantly impressed on the minds of all messengers. Possibly the old facetious comment about hiring a new messenger boy when the president dies is somewhat far fetched, but it is certainly true that in many cases department heads needing a clerk for a minor position pick a messenger who has made a good impression on them.

These comments regarding the importance of the place that the messenger holds are not made for the purpose of dignifying the messenger's job, but rather to center attention on the attitude which the office manager should take toward the messengers and the department as a whole.

**Control of the messenger's work.** Regular schedules, close supervision, and very specific instructions comprise the three main points to be borne in mind in organizing and controlling the messenger service. A number of companies find it advantageous to employ a mature man as head of the messenger department, since such a person, provided he has the right type of forceful personality, can better control the work of the boys and their attitude toward their duties than could some less mature and experienced person.

Many companies, especially large ones, use a card system for controlling the activities of the messengers. In some cases the messenger notes the exact time of his visit on a card attached to the outgoing mail box in each department. The head of the messenger department, in turn, has a control sheet which shows the time when each messenger left the central station and when he returned. In this way the head messenger may keep in close and constant touch with the activities of each of his messengers during the day.

Control over the promptness and number of trips made



by each messenger throughout the day also may be maintained by the use of a series of numbered cards. The cards, which are made of heavy cardboard, give only a number; in other words, no effort is made to print or stamp the time on the individual cards. As each messenger leaves the mailing department he—or she—is given a set of numbers for that particular trip. As collections are made from each box, the card covering that trip number is deposited in the box and the card of the previous trip collected. The cards thus collected are returned to the supervisor of the mailing department at the end of the trip. No cards are issued in advance, nor are any of the messengers allowed to retain cards in their possession.

This system, which is automatic as well as simple, has been found most effective in checking both the promptness of the messengers in their collections, and their care in delivering and collecting at each box on each trip. If, for example, a complaint is made by an executive or employee that no collection has been made from his box for the last few hours, the person receiving the complaint simply asks him to give the number of the collection card then in the box. This number indicates at once the time when the last collection was actually made. If the messenger is behind schedule, or if he has skipped that box on the last trip, this fact is established without question immediately. If, on the other hand, the proper collection card is in the box, it is assumed that the messenger actually did call at the box and did collect whatever material was in it. In the same way, in cases of complaints of failure to collect material alleged to have been in the box, it can be assumed without serious question that if the number of the collection card is correct, the papers were not, as a matter of fact, in the box at the time the collection was made. It is obvious that without some such plan as this, no basis exists for determining the facts in the case, and that dissatisfaction to all concerned is the result.

Methods used by the National City Bank of New York. When the messenger service was organized, three central

distributing points were established—one on the eighth floor, one on the fifth floor, and one on the bank, or main, floor. The operation of the stations is under the direction of the incoming-mail department, and each is in charge of a man thoroughly familiar with all departments in the bank and their location.

This man sits at a table and has before him a rack with leaves, somewhat resembling a mill wheel cut in half. Each space between the leaves is reserved for mail intended for delivery to a certain department. As the boys deliver mail to the man in charge of a station, he sorts it and places the various pieces in the rack according to departments, so that it is ready to be collected by boys making deliveries to those departments.

For instance, if the foreign teller's department, on the fifth floor, wished to send a communication to the foreign bookkeeping department, which is on the eighth floor, the note would be placed in the top tray of a double-decked basket, which is kept in every department from which communications are likely to be sent. The man wishing to send the note to the foreign bookkeeping department may then dismiss the matter from his mind, just as anyone does who drops a letter in a United States Mail box, for the procedure, after that, is automatic. Without a call having been sent out, a boy will presently appear and collect everything placed in the top trays of the baskets. This collection he will then take to his distributing station on the fifth floor. There the man in charge will take the note addressed to the foreign bookkeeping department and place it in the basket reserved for the eighth floor. In a few minutes, the boy whose delivery route takes him to the eighth floor will come by, take this note, together with any others addressed to the eighth floor, and deliver them to the distributing station on that floor, and from there the note will be promptly routed and delivered to the foreign bookkeeping department. Such a departmental communication, placed in the basket in the department where

it originates, may reach the department to which it is addressed in five minutes. Trips to make both pick-ups and deliveries are made on a ten-minute schedule throughout the day. In this manner, the bank is covered forty-eight times a day by the inter-departmental mail messengers. Between 2000 to 3000 packages or envelopes are handled by each distributing station each day. Under this system the work of delivering a message to every department of the bank can be completed in ten or fifteen minutes—a job which formerly required a good deal more than an hour.

**Reception and information service.** One of the important general services for which the office manager is often responsible is the selection and supervision of reception and information clerks. Many companies have found it desirable to establish the position of reception clerk in their offices to receive visitors. The first impression of an organization on a visitor is gained through the reception clerk. Not only is the reception clerk a guardian of company good will, but she is also a guardian of the time and energy of employees and executives. Considerable time and annoyance, on the part of both the visitor and the organization, is saved by having the visitor directed expeditiously to the proper person in the organization.

**Qualifications of a reception clerk.** As the desk of the receptionist is the front door of the organization, considerable care should be exercised in selecting applicants for the position. The qualities desired, listed according to the frequency with which they were mentioned by fourteen companies who were queried on this point, were as follows <sup>4</sup>:

Pleasing personality	Conservative dress
Good appearance	Businesslike attitude
Tact	Common sense
Good educational background	Resourcefulness
Poise	Dignity

<sup>4</sup> *Duties and Qualifications of Reception Clerks*, Policyholders' Service Bureau, Metropolitan Life Insurance Company.

Reserve	Patience
Discrimination	Quiet voice
Better than average intelligence	Refinement
Cordiality	Even disposition
	Natural conversationalist

Standard instructions for information clerks. The following extracts from the manual of instruction issued by a well-known midwestern manufacturing company indicate the variety of matters with which the information clerk must be prepared to deal.<sup>5</sup>

The information desk is the first contact and sometimes the only contact that the outsider has with the company, and it is essential therefore that our visitors receive careful consideration. If some department appears to be careless in the length of time it requires visitors to wait, this should be reported to your superior.

### Securing necessary information from callers.

1. Visitors wishing to contact individuals, regardless of purpose, should give their name, company represented, and the nature of their business (if not clear on the business card) before being announced, by telephone.

As a rule when asked, "What company do you represent?" the caller will give it, or he will state the nature of his business, or he will say, "I am a personal friend," or, "I am calling on personal business." Should he tell you the latter, say: "Then Mr. A knows you?" (Many who say they are calling on personal business are not even known to the person whom they wish to see.) Should he then admit that he is not known to the man he wishes to see, ask him if he can give you the nature of the personal business and if not, then ask him if someone has sent or recommended him.

If the caller gives a reason or indicates that he has been recommended by someone to see the person upon whom he is calling, then announce him. When he refuses to give any information, tell him: "I cannot announce you unless I may give Mr. A some information on what you wish to see him about." Should the caller still refuse, telephone the secretary of Mr. A, telling the facts. Act on the secretary's suggestion.

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<sup>5</sup> *Ibid.*

2. Farmers and dealers, as a rule, do not know whom to see. They will tell you, however, what they want. Announce them to the proper person.

3. Insurance agents and book and magazine salesmen have often given trouble by slipping into the office and calling on people without being announced. If anyone calls this to your attention, or if you see a person attempting to pass into the office, report the matter immediately to your superior. These solicitors should ask to be announced, and after seeing one person they should return to the information desk and ask to be announced to the next person. When you know a man has previously not done this, advise him tactfully of our rule. Should he still violate the rule of going through the office unannounced from desk to desk, report immediately to your superior. The rule is definitely that no one is permitted to call from desk to desk for any reason whatsoever unless given special permission. This is done only on very rare occasions, and even then a guide may be provided.

4. Collectors for credit-clothing houses, insurance companies, furniture stores, and so on, are not permitted to see our people during office hours.

### Announcing callers.

1. Visitors are to be announced to the executive by telephone. If there is already a visitor with the person who is being called upon, tell your new visitor that Mr. A or his secretary will call when Mr. A is free. If the secretary does not call within a reasonable time, the information desk girl will call again. If Mr. A is in a conference, but his secretary knows that he will be free shortly, the girl at the information desk should tell the visitor that if he cares to wait, we will be glad to have him do so, and then wait for Mr. A's secretary to call when Mr. A is free. The information girl should follow through to see that the visitor is taken care of as promptly as possible.

2. If the caller asks to see an employee who works under a department head, the department head should be consulted over the telephone and, if it is convenient for the employee to do so, the caller should be received by the employee at the information desk.

3. If the caller asks to see a secretary, the secretary should be called on the telephone. Ordinarily a secretary should receive callers at the information desk.

### When a person refuses to see a caller.

If Mr. A is called upon and is too busy to see the caller, the information girl should tell the caller that Mr. A is busy and that he cannot be seen just then, but if the caller desires to see Mr. A at another time, an appointment can be made by telephone, or he might call back at a later date.

If Mr. A states positively that he is not interested in seeing the caller, the information clerk will have to say something like this: "Mr. A is not interested in what you have to offer." Of course, all possible courtesy should be extended so as not to be irritating. (We do not give home addresses of employees without permission from the employee.)

### Report on callers.

A visitor's report is made for each day showing the following information:

<i>NAME</i>	<i>COMPANY</i>	<i>MAN CALLED UPON</i>
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One copy of this report is sent to the Buying Department and a second copy is kept at the information desk. At the end of each month a recapitulation is made and the total number of callers shown for the month. If special groups, such as those coming from schools or conventions, visit us, the total number of persons passing the information desk in each group should be reported separately.

### Handling mail.

All special delivery letters are signed for at the information desk. After signing, a messenger should be called and the mail taken immediately to the person to whom it is addressed. If a special delivery letter is addressed only to the company, it should be sent to the mailing division by special messenger. Packages addressed to an individual may be accepted. If they are addressed just to the company, they should be sent to the receiving desk.

### Fill-in work.

Work may be assigned to the information clerk by her supervisor or his secretary. Work should not be accepted from anyone else, because misunderstandings may arise as to the order in which jobs are to be completed.

### Relief clerk at the information desk.

The person relieving at the information desk should be as familiar with the work as the regular employee. The hours of relief are:

10:00 to 10:15

12:15 to 1:15

3:00 to 3:15

### Visitors desiring to inspect our office and plant.

Any person or group wishing to be taken through the office or mill should be referred to the Personnel Department. If the visitor is a dealer or consumer interested in our products, it is advisable to consult with the sales manager (or his secretary) who is concerned. If the sales manager can do so, the visitor will be given special attention.

### Donations.

Persons asking for money or product donations should be referred to the Director of Personnel. If the donation requested is some product which is to be used at a church bazaar or similar festivity, the request should be referred to the General Sales Manager of the Cereal Department. No one is permitted to solicit employees for donations of any kind.

### Beggars, drunks, etc.

Visitors of this type may make trouble, hence when they come in one of the nearby men should be called who understands the situation and can handle it properly. In no instance should information clerks make personal donations—all beggars are to be dismissed at once.

### Applicants for positions.

Persons applying for work on our sales force or in the office should be referred to the Personnel Department and sent immediately to the Personnel floor, where the Personnel Department information clerk will receive the visitor. If, in the judgment of the information clerk, the applicant is of a type who would not, under any circumstances, be considered for employment, the visitor should be told that we have no work for him and be dismissed courteously.

**Telephone service.** The work of the telephone operators in handling incoming calls is another important form of reception and information service. The telephone companies themselves long ago adopted the slogan, "The Voice with the Smile," to emphasize the importance of service and courtesy in handling telephone work.

The following instructions<sup>6</sup> issued by a midwestern life insurance company, covering the work of the telephone operators in their contacts with callers, indicate the importance of this work:

A. The switchboard operator is to answer all incoming calls by saying, "X Life," saying it in a tone of voice that suggests to the one calling that we are glad to have him call and not answering as a matter of duty.

B. In order to save the time of the person calling in and of persons in our office, our operator should try in a tactful and pleasing way to find out what subject the person calling wishes to talk about, and connect him with the proper person at once. It may be that calls will come for some officer or department head which, in reality, should be handled by someone other than the person called for. In such a case, the operator should explain why she is referring the call to someone else and give the name of the person to whom it is being referred.

C. When the person who should answer a call is not in the office, the operator or the one answering will state, "Mr. — is not in at present; will you talk with anyone else?" In case the caller desires to talk only with the person asked for, the operator, or the one answering, will then say, "If you will leave your number, I will have Mr. — call you as soon as he returns." An exact record is to be kept of all such calls, and as soon as the person called returns, he should be informed of the call in order that he may answer it promptly.

D. The switchboard operator will make outgoing business calls for those in the office desiring outside connections. It is necessary to give only the name and, if possible, the address of the person wanted. The telephone number should be given if the person calling knows it. When the operator is given one or more names to call, immediately upon establishing connection, she should inform the one calling whom she has on the

<sup>6</sup> Life Office Management Association Bulletin, February 15, 1936.



line so that the conversation can begin immediately, and the caller will not be embarrassed by having to ask to whom he is speaking.

E. If the person being called is not in, the operator will say, "Please ask Mr. — to call Mr. — at Main 7323," unless specifically instructed not to do so.

F. All calls for information regarding the purchase of insurance are to be referred to the City Sales Department. If only one salesman is in the office at the time, it is to be referred to him immediately by the cashier unless the person calling asks for a particular salesman. If two or more salesmen are in the office at the time, the prospect is to be given to the one whose turn it would be to have such prospects referred to him. The one handling salesmen's calls is to apportion such calls equitably among the different men according to alphabetical order of names. The operator must be careful not only in getting the correct number, but also in seeing that such calls reach the salesmen as soon as they return to the office.

G. When long-distance calls come in, the one being called is to be advised as to who is calling before connection is made so that no time is consumed in finding out who is calling.

H. When a call comes in and the one calling tells the operator that he wishes to talk about a matter pertaining to some one department in general, the operator will say, "Just a minute, please, I will connect you with Mr. — of the — Department." When Mr. — answers, he will say, "— Department, — speaking," so that the person calling will know that he has the proper connection. Our operator will introduce our Mr. — if she has secured name of the one calling.

I. All officers and department heads, on being called by our operator, will answer the phone by speaking their name. For illustration, when a call is made for Mr. Doe, he will say, when he picks up the receiver, "Doe speaking."

J. Our telephone lines are not to be used by members of the office force during office hours for other than business purposes. When employees are called for other than business reasons, the operator will state that the person is engaged but will call during the noon hour or after the closing hour. Exceptions will be made to this rule in emergency cases. On each floor, at the noon-hour period, a telephone line will be assigned to outgoing calls of employees. All calls must be made over these lines and must be dialed by the one calling.

K. When an officer is absent or is not to be disturbed, his secretary shall say, "Mr. —'s office, who is calling please?" She

shall then dispose of the call in accordance with the practice for handling visitors.

**Employee's personal telephone calls.** The problem of handling employees' personal calls is always a difficult one. Some companies are strict, while others are lenient. In a number of large concerns subordinate employees are not permitted to be called to the telephone on personal matters during office hours, except on special occasions. Other companies have no such hard-and-fast rule, but leave the matter to the discretion and regulation of the individual department head. It would seem, especially in the case of outgoing calls and other calls for which the company is charged, that some restriction should be imposed. This is especially true if the telephone company is willing to provide pay telephone booths at convenient locations in the building. In practice, of course, no regulation in respect to this matter can ever be fully enforced, since employees have ways whereby personal or social matters may be made to appear as necessary emergencies. The plan whereby employees are allowed to use the regular telephone service for personal calls, but for which they pay, telling the operator whether the call is personal or business, has much to commend it.

**Duplicating services.** One of the important functions of the office service department in many companies consists of performing duplicating service for the entire organization. Duplicating methods and the more usual kinds of equipment used have been described in Chapter VII. The organization of the activity and the control of production are not unlike the methods previously outlined in connection with stenographic service in Chapter IX. The office manager should receive daily reports showing the amount of work received, amount completed, amount remaining on hand with requested date of completion for each job, department for which work was done, and any other data that the practical requirements of the situation may show to be important.

One problem which arises in connection with duplicating work concerns the demands sometimes made on the department for rush service. There are occasions, of course, on which the promptest possible service is needed and must be given. It has been the author's experience, however, that the "special rush" requests are not infrequently directly traceable to poor planning and organization of the job by the department in which it originated. One practical method that has been found useful in reducing unnecessary rush work is for the office manager to see that all departments are thoroughly familiar with the production time required for all kinds of jobs which the duplicating department ordinarily handles. The time required to do mimeograph work, for example, depends on the number of stencils to be cut and the number of copies of each which are to be run. Standard time allowances for jobs of various kinds should be prepared, and no work that specifies delivery in a shorter time should be accepted without the personal approval of the office manager.

**Stationery and office-supply stock room.** The storage and issuance of office supplies is one of the service duties of the office manager that does not always receive the consideration it deserves. Too often confusion and disorder, rather than order and neatness, typify the stationery stock room.

In the first place, a definite space should be set aside for the storage of office supplies. This space should be enclosed on all sides and entrance to it should be through a door to which, incidentally, there should be not too many keys. The space selected for the storage room should be that which is the least desirable for clerical work from the standpoint of natural light and ventilation. At the same time the location must be fairly central and convenient.

In the small office there is usually one stock room, while in larger offices departmental stock rooms are sometimes provided. The amount of space needed depends largely upon the policy followed by the particular company in buy-

ing supplies. The tendency is very distinctly in the direction of more frequent purchases of a smaller number of units per order. Care, however, must be taken not to disregard needlessly opportunities for securing quantity discounts.

**Layout of the stock room.** The way in which the stock room should be planned and laid out and the stock arranged in it is important. Neatness, ease of handling, accessibility of the supplies, and compactness are the chief requisites. The bins or shelves should be arranged in straight rows with allowances for aisle space sufficiently wide so that two people may pass each other conveniently. The exact width of main aisles and cross aisles depends somewhat on whether a hand truck is to be used. If such trucks are used, at least four feet should be allowed; otherwise, two to three feet are sufficient.

The use of steel shelving rather than wooden partitions is to be recommended. Steel shelves are adjustable; additional units can be purchased as occasion demands, and, in case the location of the stock room is changed, the shelves can be taken apart and set up elsewhere without difficulty. Wooden shelves and partitions are not so easily moved; in fact, in many cases a change in location means the destruction of the wooden equipment with consequent loss and the additional expense of new construction.

The supplies themselves should be arranged so that the more bulky and heavy pieces, such as packages of letter-heads, second sheets, and so on, are on the bottom or lower shelves, while the lighter articles are on the upper shelves. Forms should be stored by form number.

**Use of a stock-record card.** The use of some kind of stock-record card is desirable. By using simple but complete stock records, the office manager may determine quickly and at any time not only how many units of a given kind or class of supplies are on hand, but also the date when the last lot was ordered, the number used, the departments to which the supplies were issued, the place

in the stock room where the supply is kept, and so on. The precise form which the stock record will take depends, of course, upon the needs of the individual organization.

**The use of bin tags.** For a small office, or in cases where for one reason or another it is not necessary to maintain as detailed a stock record such as has just been described, a bin tag is often used. This is a small tag or slip which is tacked to the shelf over the space in which the material is kept. Two columns are provided on the tag, one for the quantity and the other for the date on which the quantity was on hand. Every time supplies are issued or received, the clerk simply crosses out the previous notation and makes the proper new entry in the line below. In this way one may ascertain at a glance the amount on hand at any given time.

It is to be noted, however, that the use of the bin-tag plan does not give as full and complete information as does the stock record. One cannot tell by looking at the tag, for example, whether more supplies have been ordered, nor to whom or to what department the supplies have been issued. Moreover, the use of a stock record makes it easy for anyone who is unfamiliar with the location of the supplies in the stock room to find the items by simply referring to aisle and bin number given on the heading of the stock record.

Still another plan which is sometimes used, not so much for keeping a record of amounts on hand as for the purpose of being certain that the stock clerk notifies the purchasing department when the supply on hand of any given item is running low, is to tie a tag on a package—which, of course, is to be used last—so that it necessarily will come to the attention of the stock clerk when it is being opened. On the tag are printed instructions, such as, "Before opening, notify the purchasing department that the order point has been reached on this article." If desired, this tag may have the name and symbol number of the item written on it. In this case the supply clerk need

only tear the tag off and send it to the purchasing department.

**Issuance of office supplies.** In practically all well-managed offices only designated persons are allowed to enter the office-supply stock rooms. The establishment of a rule of this kind not only avoids the temptation of the office employee to take a greater quantity of supplies than the requisition calls for, but makes it possible more definitely to place the responsibility for inventory shortages, appearance of the stock room, and so on.

In some offices the practice is to have each employee who requires office supplies of any nature fill out a requisition for what is needed and give it to his immediate superior. These individual requisitions are periodically accumulated and filled, and the supplies given to the individuals requesting them. In some cases, particularly where the organization is large enough to justify the existence of a sub-supply room in each main department, requisitions are filled every day. In this case, however, the departmental supply room carries only the more usual items, such as stationery, pencils, pens, erasers, clips, and so on. This supply, in turn, is replenished periodically from the general supply room.

Various attempts have been made to work out a practical plan whereby the amount of supplies issued to any one clerk may be definitely controlled. Some companies, for example, have invested in metallic pencils for all office employees. A stock of lead fillers is kept on hand. Each clerk is told that she will be held responsible for the pencil. Another company requires every stenographer to show her old notebook before being allowed to draw another. Still another company allows each clerk six pencils and one ink eraser a year. Frankly, the writer is not in entire sympathy with such methods. Theoretically it may be possible to save something in office supplies by the adoption of such strict methods of control. On the other hand, observation, experience, and faith in human nature indicate

that a great majority of office employees are honest and not intentionally wasteful. Perfection is not attainable under any circumstances, and it is seriously to be questioned whether a method of issuing office supplies that suggests too economical a policy does not do more harm than good.

**The use of obsolete paper and forms.** In every organization there is a certain amount of mimeographed, multi-graphed, or printed matter which, for one reason or another, is no longer of value. A number of concerns cut this up into convenient sizes and make pads of scrap paper out of it. Regular printed memo pads are necessary for certain classes of work, but there are countless occasions when just a piece of paper of any kind is needed for making a notation or doing a bit of figuring. For such purposes the back of the obsolete multigraphed questionnaire or form letter, made up in blocks or pads, is quite good enough. A saving such as this may seem small, and it is, if one is considering only a single pad. In the aggregate, throughout the year, however, the smaller number of regular memo pads used will more than offset the small cost of making up the scrap pads.

**Inventory of office furniture and equipment.** In the small and medium sized company the control and disposition of office furniture and equipment is not a matter of great importance. Purchases are made infrequently, and the number of pieces on hand is not so large as to require a numbering and inventory system.

In large organizations, however, the control and disposition of furniture and equipment is usually one of the responsibilities of the general service section. In such cases the common practice is to number each piece and maintain a complete and detailed record of its location. Whenever furniture or equipment is moved, the necessary changes are made in the records. When purchases of additional equipment are requested, a check is first made to determine whether the required piece is available somewhere in

the company, either in a department or in the furniture stock room. By maintaining complete records, it is often possible to supply the needed equipment without purchasing it. Such a plan is but another example of the many ways in which the progressive office manager can effect economies for his company, thereby helping to establish more firmly in the minds of the chief executives the fact that the office is a productive department.



## CHAPTER XI

### *Office Management in the Order Department*

In the preceding chapters attention has been centered largely on the physical and service factors of office management, including the selection and layout of the office, equipment, appliances, and the filing, stenographic, and general services. All these activities are an essential part of office management. Together they comprise a group of responsibilities to which the office manager necessarily devotes a considerable share of his time. In an increasing number of cases, however, the office manager, in addition to his service responsibilities, is concerned in his functional capacity as supervisor of office methods with the office work of the business and operating departments. For this reason this and the next four chapters are devoted to a discussion of the office work of those departments that are common to all kinds of business. In each case the principles and basic methods of operation are first stated briefly; then the methods and procedures used by a number of representative companies are described.

**Work of the order department.** The primary function of the order department is to prepare from the customer's original order the necessary papers and instructions for the use of the other departments of the business. In an industrial concern this involves the issuance of factory production orders. In a mercantile or trading business the order department is responsible for issuing the requisitions

on which the goods called for are withdrawn from stock. In a service organization the order department is really the production division, in that it produces, or at least plays a major part in producing the service that the company sells.

In organizing the order department and in planning the methods by which it shall be operated, it must be remembered that the factors of time and accuracy are of the utmost importance. Just as production processes cannot be started in a factory until the necessary raw materials have been secured by the purchasing department, so it is first necessary that the order department perform its function before other sections can do their part. Time lost in the order department can result only in delay on the part of all departments whose work is to follow. Moreover, mistakes made at this first operation—translation of customers' orders into operating instructions—are unlikely to be noticed until after the completion of the job, with resulting complaints and difficulties. Time and accuracy are therefore essential characteristics of a sound order procedure.

More specifically, "an efficient order system should furnish a record of the purchaser's name and address and give complete shipping instructions. It must furnish a sufficient number of copies for each department interested in the transaction. It must expedite the posting of an order to the purchaser's account. It must necessitate as few written additions as possible, and a minimum of clerical help. It must also take care of the preparation of invoices and the writing of labels, tags, or other shipping material, and it should furnish records for the statistical and production departments."<sup>1</sup>

The following steps usually comprise the order routine<sup>2</sup>:

1. Mail is opened.
2. Order is interpreted.

<sup>1</sup> The Dartnell Corporation, Report No. 298.

<sup>2</sup> "Yardsticks of Business Practice," Survey No. 4. *Management Methods*. McGraw-Hill Publishing Company, Inc., New York, 1933.

3. Credit is approved.
4. Order is copied on house order form.
5. Order form is sent to stock room for shipment.
6. Prices are extended.
7. Invoice is made.
8. Correctness of invoice is checked.
9. Invoice is mailed.
10. Invoice is charged.

**Order department procedure of a manufacturing company.** The order and invoicing procedure followed by the Graton and Knight Manufacturing Company is an excellent illustration of a well-planned order-handling system.<sup>3</sup>

Customers' orders are received from all parts of the United States and from many overseas countries by mail, telephone, and telegraph. Telegraph and telephone orders are usually confirmed later by mail. Orders come on postal cards and in envelopes, and the orders are of all colors, dimensions, and different types of printed forms.

The origin of an order usually dates back to the request of a customer, or prospect, for prices and samples. On the receipt of an inquiry from a prospective customer, requesting, for instance, prices and samples, the credit standing of the prospect is first determined. The inquiry then is referred to the estimating division of the cost department. Current cost prices are determined by this division, and the inquiry, with these cost prices, is returned to the sales division. On the basis of the data furnished by the estimating department, the sales division quotes the customer. The data furnished by the estimating division is on a 6 by 9 card. This card is retained by the sales department as a price or reference card for use later in the event the order is secured.

All mail is received by and routed through the mailing division. There the mail is opened and sorted according to the various divisions to receive it. The mailing department usually starts its day's work at about 6.30 or 6.45 A.M. The office opens at 8.00 A.M., at which time all departments have the morning's mail to begin the day's work.

After the mail is sorted, the orders are sent first to the credit

<sup>3</sup> Wilson, Paul H., "Order Systems and Invoicing," *Annual Proceedings*, pp. 85-89. National Office Management Association, 1936.

department. No order can be entered by the order department unless it has the official approval of the credit department. The majority of the orders are quickly approved and released by the credit department, but those from customers whose standing is such that credit cannot be extended are held by the credit department for further treatment or consideration. Orders approved and released by the credit department are sent to the various divisions of the sales department.

### Preparation of orders.

Junior members of the sales division then prepare the orders. The first step is to locate, if possible, a price card for the customer and the particular commodity ordered. Assuming that there is one in the file, the first checking is for the date of the last order or quotation. If there has been any change in the sales prices since the last order was received or last quotation made, the estimating department is called upon for a new estimate. If it is necessary to make any changes in sales prices to the customer, the sales division notifies the customer of this fact and holds the order until the customer gives the necessary approval.

Assuming that there is a card and that the sales price is correct, the price card, with the customer's order, is sent to the order department for entering on the regular factory forms. This price card has had entered on it previously not only the price quoted to the customer, but all cost data, manufacturing instructions, and so on, which, when entered on the factory order, will enable the factory to complete the order promptly and correctly and on a basis which will yield the desired profit. The price card also includes other data, such as cash discount terms, shipping instructions, salesman's territory number, salesman's commission percentage, and any other data which may be needed for the proper writing of the factory order or sales invoice. In addition, it has certain additional data necessary for proper invoicing, such as the number of copies required, points to which bills should be sent, terms, and so on. There are also a number of customers to whom invoices must be made out on printed forms, which they furnish.

With the information shown on the sales price card the order writers are ready to type on the proper forms the information which will make it possible for the factory to manufacture accurately and promptly the customer's order. The order form is made up to eleven copies as follows:

- |                          |                         |
|--------------------------|-------------------------|
| 1. Shipping copy         | 7. Promise copy         |
| 2. Acknowledgment copy   | 8. Branch office copy   |
| 3. Shop copy             | 9. Salesman's copy      |
| 4. Production copy       | 10. Extra copy          |
| 5. Factory shipping copy | 11. Numerical file copy |
| Office copy              |                         |

In the left-hand margin of the order forms space is reserved for the typing of manufacturing instructions and prices. Prices appear only on the shipping, acknowledgment, and office copies. The acknowledgment copy, which is sent to the customer, is perforated, and that part of the copy order which contains the manufacturing instructions and prices is not sent to the customer. The prices are left on the shipping copy, as this is the one from which sales invoices are prepared.

### Disposition of copies.

The procedure, after the orders are typed, is as follows:

The full set of orders, with the price card and customer's order, is given to a proofreader, who carefully checks not only for the correct typing of the information, but also for errors which might possibly have escaped the attention of the typist, such as incorrect factory instructions, and so on. The different copies of the order are then separated and sent to the respective divisions of the factory.

The acknowledgment copy is retained in the office until promised delivery dates are obtained. Upon receipt of this data from the factory, the shipping date is entered on the acknowledgment copy, and then this copy is mailed to the customer.

The shipping copy is sent to the shipping room, where it is retained until the manufactured merchandise is received from the manufacturing department.

The shop and factory shipping copies are sent to the department manufacturing the merchandise. Both copies are kept by the department until the order is completed and ready for shipment, when the factory shipping copy is used as a packing slip between the factory and the shipping department. The production copy is used by both the production and cost departments.

The branch-office copy is sent to the branch in charge of the territory from which the customer's order originated. The salesman's copy is sent to the salesman covering the territory in which the customer is located. Both these copies are used to notify the branch and the salesman that the order has been received.

In addition, it gives them valuable data to use in the event the customer later requests specific information regarding the order.

The extra copy is just that—an extra copy. Sometimes the sales-correspondence division has an occasion to use copies of specific orders, and it is simpler to make an extra copy of every order than to make extra copies of orders that have already been written.

The numerical copy is filed as the title indicates, numerically. Since all other copies of the orders are filed alphabetically by customer's name, it is apparent that some order might possibly become lost or misplaced, and would not be discovered until an inquiry or complaint was received from the customer. The numerical file copies are kept in the order department. As the orders are shipped these copies are properly marked, and at certain stated periods a careful check is made of the orders filed numerically to make sure that each and every order has been properly taken care of and shipped. Another advantage of having a numerical file is that sometimes information regarding a certain order number is desired, and if there was only the alphabetical file to refer to, it would be extremely difficult to locate the proper order.

### Handling the order in the shipping department.

Upon the receipt of the merchandise by the shipping department, all shipping information such as weights, length of belts, and shipping instructions is entered on the shipping copy of the order. These data, with a copy of the bill of lading or express receipt, are sent to the invoice department for billing.

Upon the receipt of the factory shipping copy in the invoice department, the factory shipping copy is first compared with the office copy, which is kept in an unfilled-order file until shipment of the entire order has been completed. In many cases it is necessary to make partial shipments of orders. This necessitates the typing of a "back order." Back orders are made up in two copies, one for the shipping department and the other for factory shipping. A notation, showing the items and quantities shipped, is entered on the office copy. The original shipping copy is then ready for invoicing.

### Invoicing procedure.

The comptometer operator makes the first price extensions from the information shown on the shipping copy. Considerable use is made of standard list prices, from which discounts

are given to various customers. Pricing or invoicing consists of extending all items at list prices, less discounts, and then adding freight, express, or parcel-post charges. Space is reserved on the order forms for these extensions. A second comptometer operator verifies the extensions made by the first operator. The information next is typed on the invoice form, which consists of seven copies. While all customers do not require duplicate invoices, so many of them do that it has been found better to send every customer a duplicate invoice rather than to make it necessary for them to write in for a duplicate invoice, thus necessitating the typing of a duplicate.

The second sheet of the invoice form is used by the cost department for preparing the inventory records. The cost department enters in the extreme right-hand column of this copy the cost of the merchandise shipped on the invoice. The total of the postings made by the cost department must agree with the total of the accounts-receivable copies, which are used by that department for posting to the customers' accounts. From their copies of the invoices the cost and statistical departments secure the data necessary for the final-sales and cost-of-sales entries at the end of each period. The tabulating-machine division also receives this information and secures not only the total sales and cost of sales, but also other sales data, such as sales by salesmen, by branches, by commodities, by groups of commodities, by companies, and so on.

The branch office and the salesmen's copies of the invoice are sent to the respective branches and salesmen for the same purpose that copies of the orders are sent. The salesmen sometimes use their copies to check up the home office calculations of their sales and earnings.

### Sales analysis.

The sales-record copy is retained in the order and invoice department and filed by customers. The information by sales is posted to a card, which is used as a sales-record card and also is used by the sales department as a check upon the salesmen in connection with individual customers in their territories.

It may appear that in filing the sales-record copy of the invoice by customers and entering the sales amount on the sales-record card not only by amount, but also by commodity or code, there is a duplication of the same data shown on the accounts-receivable records. Experience has shown, however, that, because of the type of information on the accounts-

receivable records and the use which is made of them, it is not very efficient to use them for sales-record purposes as well. The information shown on the sales-record card is tabulated twice a year, and special information regarding the salesmen's territories by groups of customers, or types of customers, is given to the sales manager.

### **A combined order and invoice department.**

A very careful study of personnel problems and peak loads resulted in the decision to combine the sales-record department with the order and invoice department. Obviously peak loads must be taken care of promptly. In order to do this practically, no work is done on the sales-record cards on Mondays, the day the largest number of orders and invoices must be handled, as it requires the entire order and invoice department organization to handle the work that comes on that day. Even then it is not always possible to complete the day's work on Monday, but when this happens the remaining work is scheduled as rush work Tuesday and takes precedence over all other regular work. Many of the products, especially belting, are needed by customers immediately, and therefore it is very essential that these orders be written and sent to the manufacturing department without any delay. It is also necessary, as soon as the goods are shipped, that invoices be rendered to the customer promptly. The customer, as a rule, does not wish to get his merchandise before he receives the invoice, and for that reason it is important to have the sales invoices in the mails at the earliest possible moment. Prompt invoicing of shipments is important also because one day's delay in the mailing of an invoice means at least one day's delay in receipt of payment for such merchandise. The shipping day stops at 6:00 o'clock each night, and the billing for that day's work is done on the following day. Thus goods shipped on Monday are invoiced on Tuesday. Under this schedule invoices are usually in the hands of the customers before the arrival of the goods themselves.

Since the sales-record department is a division of the order and invoice department, it is possible to use the personnel in both groups to the best possible advantage. On rush days all the clerks are used for writing orders and invoices, while during the dull period of the week these same clerks do the sales-record work. The information from the sales records is tabulated twice a year. On these occasions it is sometimes necessary to put additional clerks into this department in order to complete



the information for the sales department as promptly as possible.

**Order-invoice procedure of the American Optical Company.** The procedure followed by this organization is representative of the methods used by companies operating a chain of either wholesale or retail distributing branches.<sup>4</sup>

The company operates approximately 175 domestic, wholesale distributing branches. Each of these branches is regarded and treated by the home office and factory organization as a customer, and all factory billing is restricted to these branches. Neither the main factory at Southbridge nor the branch factory at Cambridge, Mass., does any direct billing to the trade. A customer's contact is principally with the branch located nearest to him. When a direct factory-to-customer shipment is made, the factory bills the branch handling the customer's account. The branch in turn bills the customer.

The combined order-invoice form used is in triplicate. It is devoid of all frills, and designed to provide the minimum amount of information necessary to expedite handling, packing, shipping, and billing the merchandise that the branch has ordered. After the branch has made out one of these orders, the original and duplicate copies are sent to the factory and the triplicate copy is retained by the branch as an unfilled order record until receipt of the merchandise called for. It is optional with the branch whether these orders are made out on the typewriter or in pen or pencil.

Upon receipt of the original and duplicate copies by the factory, the unit prices, extensions, and totals are entered on both copies and the original copy of the order—which has now become a priced memo, not an invoice, from the factory's standpoint—is enclosed with the merchandise to be sent the branch.

The duplicate copy of the completed order is sent to the factory-merchandise purchase-record department for posting to the purchase-record cards. From there it goes to the cost department for factory costing of the merchandise shipped. The prices used in billing a branch for merchandise are selling prices

<sup>4</sup>Brigham, L. H., "Pre-billing, or Combined Order Invoice Form Plan in Use by American Optical Company," *Annual Proceedings*, pp. 33-35. National Office Management Association, 1932.

and not cost prices. After factory costing, the duplicate copy is routed to the card-punching and sorting department in order to obtain the daily control of merchandise in transit by commodity classifications, and the daily total of factory-to-branch billings. The duplicate copies are sent from the order-filling department to the purchase-record department every hour throughout the day. This department delivers the last of the previous day's billings to the cost department not later than twelve o'clock the next day. The cost department completes its factory costing operation about three o'clock on that day and relays the costed invoices to the card-punching department for establishing the controls mentioned above. This work is completed sometime during the last half of the second day following actual billing of the merchandise, and the order-invoice copies are in the card-punching department files and ready for reference on the morning of the third day following the actual billing of the merchandise.

The branch, upon receipt of the merchandise ordered and the priced memo copy, checks the merchandise against this copy and transfers the grand total, only, to the triplicate copy of the form which they have been holding. This triplicate copy is then approved by the branch manager as an accepted invoice, and the total listed on a so-called branch purchase report. This purchase report, together with the triplicate invoice copies listed thereon, are sent to the home office at the end of the week. Upon their receipt the amounts are credited to the merchandise in transit account and charged against the branch as merchandise purchased. At the end of the month the tabulating-machine department submits a statement, listing the factory shipments to each branch, and a reconciliation is effected between this statement and the returned triplicate order-invoice copies. After reconciliation these copies are filed with the weekly purchase reports, on which they are listed in detail.

### Advantages of this procedure.

In addition to substantial savings in equipment, annual service contract charges, a reduction of approximately 15 per cent in personnel, and the elimination of a variety of different order forms, one of the most important advantages of this procedure is the time saved in the filling of orders calling for stock merchandise. In these days of small stocks and hoped-for rapid turnover, distributors of merchandise are being called upon to give

better and better service. The dealer is, to a large extent, depending upon the producer or distributor more than ever to stock much of his merchandise for him. The business of the company is largely dependent in giving a customer prompt service; therefore, one of the necessary assets to meet competition effectively is the speed with which orders for stock merchandise can be filled and delivered to the customer as compared with competitors. Under the previous order-filling and billing system, it took from two to five and occasionally seven days to get many stock orders through the various paper operations and the several order-handling departments into the hands of the shipping department. Under the present system all stock orders are filled and shipped by the factory on the day of receipt.

### Merchandise control and inventory system.

The merchandise control and inventory system of this company is a part of, and definitely related to the order-invoicing routine described above and therefore merits brief comment.

From 1923 to the fall of 1930 the factory organization maintained a master card control inventory of all stocks at the nine head-branch stock depots. These points, in turn, conducted sub-master inventories of the stocks in the 175 branches to which they distributed this merchandise. This system, while it had its advantages, obviously resulted in a considerable duplication of effort, required a large personnel, and necessitated a tremendous amount of clerical labor, stationery and form consumption, inventory-card equipment, and postage expenditure.

In the fall of 1930 the perpetual inventories were discontinued at both the home office and at the nine head-branch stock depot points, and purchase or consumption records were substituted, with the result that the company now is interested principally in the volume and value of merchandise distributed out of these stocks rather than in the balances remaining in them. Inventories of actual on-hand stocks of merchandise at the nine stock depot points, or among the 175 branches, are now made only as often as required for specific purposes, and with the exception of inventory taking at the end of the year, cover special classes of merchandise only.

### Advantages of this plan.

The benefits derived from the change in the control of stock-merchandise inventories may be summarized as follows:

	1930	1932	Reduction
Factory stock department personnel	161	115	46 or 29%
Number of stock departments . . . . .	21	11	10 or 52%
Merchandise inventories . . . . .	100%	94%	6%
Number of departments involved in routine handling of stock orders . .	8	3	5
Average time required to fill branch stock orders . . . . .	5-7 days	1 day	4-6 days
Branch selling organization personnel . . . . .	2000	1875	125 or 6¼%
Branch selling organization inventories . . . . .	100%	71%	29%

**Order routine of the Jewel Food Stores, Inc.** The work of the order department at the main office of a chain-store organization obviously comprises one of the most important office and clerical activities of such a company. The following paragraphs describe the procedure of the Jewel Food Stores, Inc., of Chicago.<sup>5</sup> Orders received come from the store managers, and are confined to the standard items handled. These total about 1200, and there are inevitable changes as new items are added and other items discontinued, so that the set-up cannot be static.

### Order form and procedure.

The foundation form of the entire structure is the store manager's order, which automatically becomes the invoice. On this form is listed by name and size every one of the 1200-odd items carried. The order form is printed on twelve pages, two numbered columns to the page. The page is perforated lengthwise down the middle for easy separation of columns so that there is a total of twenty-four columns on twelve sheets. The last page contains a number of blank lines, which are used for added items as changes are made during the month.

To place his order, the manager writes in before the name of the item the number of cases he needs. The store order comes to the office for an invoice number and the addition of new goods, that is, new items in the line which the manager does not know about and of which he is sent an initial stock automatically. The order form next goes to the warehouse for assembling, or

<sup>5</sup> "An Order Routine That Reduces Costs and Errors," *Management Methods*, McGraw-Hill Publishing Company, Inc., New York, June, 1933.

as it is called in many businesses, order-picking. The order-picker assembles the order, checking the items as filled. If an item ordered is out of stock, he puts a ring around the figure. The sheaf of twelve pages next comes back to the billing department. Here it is transferred by the duplicator to another set of twelve sheets of white paper, which have previously been run through the duplicator to print on them the retail prices, per case and per unit, of every item in the line. Thus, when the filled order form is transferred to one of these sheets, the white sheet carries all of the printing and writing from the order form, and opposite each of the 1200 items is the retail price of that item. These prices are not extended to show the amount of the invoice in dollars. It goes with the load of goods to the store in exactly this condition, and if the manager wants to know immediately exactly how much he has increased his store inventory, he is at liberty to figure it out for himself. If he waits, he gets this information later in condensed form.

### How the prices are added.

The method of setting up the prices daily on the invoice forms is extremely simple. The retail prices per case and per unit of all 1200 items effective for a given day are typed in duplicating ribbon on the black-ink copy the previous afternoon, and about fifty copies of each are run off on blank white paper. Since the prices are the only data in the duplicating medium on the master copy, the result is a white sheet containing only columns of figures. In one column are retail case prices and in the next column are retail unit prices. Of course it is essential to this operation that a perfect register be secured, that is, that the printing appear in exactly the same place on each copy, so that when the store order form is later superimpressed on the sheet the right price will be opposite the right item of merchandise, and so that the prices will always appear in the price columns. Thus the next morning when the filled order sheets begin coming into the office from the warehouse, they are reproduced on these priced sheets. The result of the double run through the duplicator is a delivery ticket for checking shorts and overs on the load, consisting of twelve pages, with the latest retail prices of every item handled, all ready for the store manager to use if he wishes to check any prices in his store's stock. On this invoice are the quantity figures of the manager's order, in his own handwriting.

At this point in the routine come the first calculating oper-

ations. The first step is to extend at retail prices the day's shipments to the store. Each calculating-machine operator has twelve celluloid sheets, each the exact size of a two-column invoice sheet. Each morning when she starts work she prepares her twelve celluloids for the day's work. First she takes a set of the white sheets on which have been printed the day's correct authorized retail prices, and trims out the columns of price figures. Then she pastes the columns of figures on her celluloids, being very careful to get the strip in exactly the right place, both vertically and horizontally, where the price column comes on the actual forms. When a store order comes to her for figuring extensions, she places the order in the picture frame, and places the particular celluloid containing the retail prices applying to the goods on this sheet over the form. Thus she has the prices right alongside the quantities that she is figuring. Cutting out and sticking up twenty-four strips takes a little of the operator's time each day, but in the end it saves much more than it takes. The operators would like, for ease, to simplify the job by correcting daily only the items on which there were price changes. But the company insists that they replace each yesterday's strip with a today's strip, thus preventing their missing a price change. This is in line with the basic policy of this whole method, namely, that an item be written only once and that thereafter all copies be made exclusively by the duplicator, thus eliminating any chance of error.

The next operation is to tear the original copies of all that day's orders apart and sort them into stacks by like columns. Thus all copies of a given column are stacked together. These forms are punched along the top to fit over the pegs of a pegboard. The operator now pegs all of a given column on the pegboard, leaving only the significant portions of the forms exposed. Next she cross-adds each line, in cases, to get the total shipments of each item for the day, posting that total to a blank summary strip. This summary strip, priced at retail, is extended, totaled, and checked against the totals of the individual store invoice extensions. This makes it very easy to find errors. The accumulated retail extension of Column 1, for instance, is balanced against the total individual extensions of Column 1; by working each column separately, errors are revealed instantly. Thus the retail extension is proved. In addition, the retail total of the day's shipments is secured, so that it can be balanced against the total of the individual store totals as entered in the journal. This is the point where the order procedure ties into the accounting.

### Stock records.

The stock-record sheets are printed in blank except for rulings. One stock sheet is used for each column of the order and invoice form, and the list of items is printed on the stock sheets. The first entry on the week's stock-record sheet is the opening inventory, at cost. The opening inventory of the new week is, of course, the closing inventory of the previous week, and is duplicated on the new week's sheet direct from the closing inventory column of last week's sheet. Each day's shipments are transferred to the stock-record sheet by running them on the duplicator, getting the original impression from the summary sheet of daily shipments as described above. This method eliminates the hand labor of copying and removes all possibility of error, since these figures have already been proved in the course of the invoicing and extending operations on the pegboard and calculating machine. The week's stock-record sheet carries six vertical columns, one for each day. The method originally used required hand posting of about thirty thousand items each week and the same number of mental subtractions by clerks and postings of balances. This required four clerks, including the other duties attendant thereto, and resulted in a stock record with many errors. The work is now done by one man and, in addition, he has time for other work.

Concurrently with the preparation of this sheet, receipts of incoming goods at the warehouse are posted on the receipts record. The daily balance is not figured, but by laying the receipts sheet alongside the stock-record sheet, it is always easy to make a quick mental calculation of the exact condition of the stock. When the weekly balance is closed and the calculating-machine operators figure the closing inventory, the receipts sheet is laid alongside the stock sheet and receipts are added to the opening inventory before deducting shipments. Obviously, opening inventory plus receipts, minus shipments, equals closing inventory. Since the results are proved all along the way, the stock record must be accurate.

### Summary of the plan.

The essentials of this procedure are a stock record carried in units, which in the closing inventory are extended into dollars at the close of an accounting period, and a billing procedure with absolute proof. This is also the basis of the cost entries in the accounting records. At the end of each four-week period the cost of merchandise and the gross profit is calculated from

the stock records. The percentage of gross margin on the retail billing is then figured for the business as a whole, and this percentage applied over all stores to arrive at their gross profits. This approximation is, by actual experience, very close to accurate, and experience has shown clearly that the slight refinement of accuracy which would be attainable by figuring each store's actual costs and gross is not worth what it would cost.

The principles underlying the whole plan are very simple and prevent excessive accounting costs. They are:

1. Make an entry only once, and thereafter reproduce it mechanically, to save clerical expense and prevent errors.
2. Accumulate all figures in a calculating machine from the original document.
3. Make accumulations only when they are required. For example, instead of extending stock balances daily, they are extended only weekly. The buyer knows which items need to be watched, and sends his clerk to the records to check these whenever necessary. Thus instead of making 1200 extensions daily, only a mere handful are calculated.
4. By making original entries on forms designed for pegging, these records are set on pegboards and thus can be checked by the square-check method and errors avoided.

### What the plan accomplishes.

The major advantages of this plan may be summarized as follows:

1. Combines the order and the invoice on one form.
2. Gives a recap of daily shipments out of the warehouse, by items and by departments if needed.
3. Proves the accuracy of billing of shipments.
4. Eliminates hand pricing of shipments.
5. Permits the warehouse to fill the order from the original order form instead of from a retyped copy, thus reducing chances of error as well as clerical expense.
6. Adds elasticity, for it permits filling late-arrival items right up to the minute the truck leaves.
7. Insures accuracy of stock records, because these are mechanically reproduced from the proved daily shipments.
8. Gives buyers notice of a warehouse shortage of any item immediately upon return of the order from the warehouse.
9. Gives a weekly and periodic summary of shipments by items and/or departments.
10. Gives the buyer a weekly inventory of all items without any hand or typewriter copying.



11. Gives the individual store manager a complete, up-to-date price list on all items in his stock every time he receives an invoice.

**Order department procedure in a mail-order house.** The following paragraphs describe the methods of handling orders in a large mail-order company.

All incoming mail is sent directly to the in-mail department. Letters are opened by an ordinary letter-opening machine which, in addition, stamps each letter with the date and the mail number. Each delivery is given a number. The letters are then marked—for example, 1-2-37-2, which means the second mail received on January 2, 1937. Along the entire side of the mail room is a sorting board, which is low enough so that the girls can sit down on stools of ordinary height while at work. In the middle of this table-like arrangement there are two rubber belt conveyors, one about eight inches above the other. Since this conveyor system is in the center of the sorting board, the girls can work on each side of it.

The orders are sent through in accordance with a carefully planned schedule, which, however, varies with the number of orders received. In the sorting of the mail, the orders are sorted out and put on the upper of the two conveyors, while all other correspondence is put on the lower one. The orders go along the conveyor to the end of the sorting board to a table. At the sorting board the orders are pinned on order forms, on each of which is a number. At the table the orders are marked with the amounts, after which they are checked and added. The cashier's department takes care of all money orders and checks, as well as currency.

The orders next reach the stenciling department. This department has two main divisions. The first consists of the files, containing a stencil for every person who has ever ordered from the firm previously, and the other is a group of stenciling machines on which stencils for all new customers are made. A record is kept for each individual customer, and all his transactions and other relations with

the company are recorded. These files are arranged alphabetically as well as by states and localities, and contain approximately two and one-half million stencils. The order form is stenciled, as is the gummed label which is to go on the package.

From the stencil department the orders go to the order-typing department. In this department the order is typed on a duplicate form. If more than one item is ordered, a separate sheet is typed for each one. On this sheet appears the history of the order. M 10:20 A 12, for example, means that the order is scheduled to leave Monday at 10:20, and that it is to go to section A, in the assembly department, and to bin 12. The order form goes to the bin, so that when the time comes to send the order out the items may be checked against the order to see that it is complete. The individual item sheets are sent through pneumatic tubes to the departments for which they are intended. All orders are scheduled to leave the house within twenty-four hours after they are received.

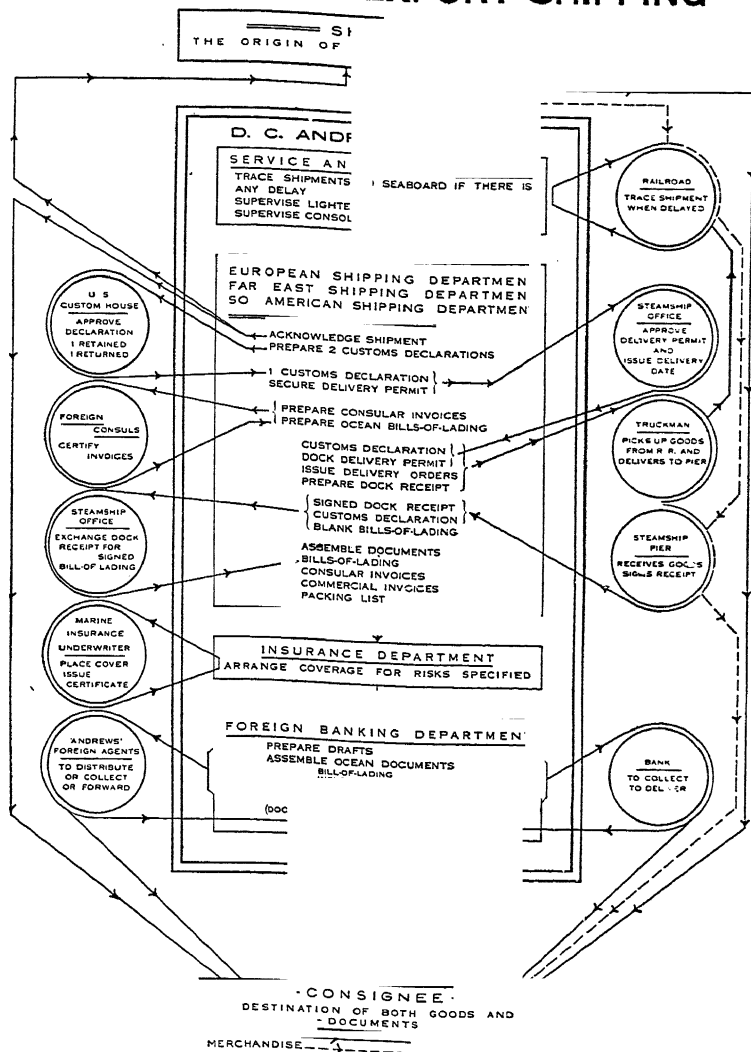
The orders next go down to a desk in each stock room or merchandise floor, as it is called, where the clerk goes to the shelves and selects the article called for by the order sheet. The clerk puts the article along with the order sheet on a table on one side of the room. Another clerk then takes the various articles and sends them down a large chute which connects the merchandise floors with the assembly floor. On a platform just above the assembly floor the articles are sorted into sections. Sections A, B, C, and so on, are for combination orders, and another section for single orders. The sections are further subdivided by ten-minute periods and by hours. The orders are then sorted into these ten-minute periods according to the time schedule stamped on them. When the articles come to the various sections from the sorters on the platform, they are dropped into the appropriate hopper. At the bottom of the hoppers is a long sorting board. Here each article is put into its individual bin. Before the merchandise

is shipped, it is checked with the order, which has also been put into the bin. If the check shows the order to be complete, it is wrapped up and the gummed, stenciled label is stuck on. The orders then are sent to the shipping room, in which is a substation of the U. S. post office. The orders are put into regular mail sacks, and they go out in this form.

**Order department in a service organization.** The work of the order department in a company which has service rather than merchandise to sell offers an excellent illustration of the need for a systematic and efficient order routine. Here the order department is, in fact, the production division itself, rather than merely a service department. The methods used by an export and import freight-forwarding house may be cited as a case in point. In the following discussion it will be assumed that a shipment of goods, originating in some domestic inland city, has been sent to the forwarding house for shipment to a European destination.

Upon the arrival of the order from the shipper or customer, a set of forms is prepared on a billing machine. The first of these forms is an acknowledgment of the order and is sent at once to the shipper. At the same time customs declarations are prepared. These are registered with the U. S. Customs at the port of exportation, and the registered copy is returned to the forwarder, who presents it to the steamship line. When the railroad company sends its notice that the goods have arrived, an order is made out directing either that the railroad deliver the goods by lighter to a given pier or that the truckman pick them up at the railroad yard and make delivery. At the same time an ocean bill of lading is prepared and handed to the steamship company whose boat is to carry the goods to Europe. A consular invoice is also prepared and sent to the consular office, with an accompanying check, if necessary. While the ocean bill of lading and consular invoice are in the hands of the steamship company and the consular

# GRAPHIC CHART SHOWING CO-ORDINATED EXPORT SHIPPING



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D. C. ANDREWS & CO., INC.

PREPARED BY  
**D. C. ANDREWS & CO., INC.**  
FOREIGN FREIGHT FORWARDERS

27-29 WATER STREET

NEW YORK CITY

BOSTON, 44 BROAD STREET

Fig. 73.—Chart of Order Routine.

office, respectively, insurance papers, if any are necessary or are asked for, are being prepared by the insurance broker, who in some cases is located in the forwarder's office.

When all the papers have been returned and completed, they are assembled and sent to another department, where they are checked for completeness and accuracy, after which a schedule of the various charges to be made is prepared. From here all papers, including the charge slip, go to the mailing clerk, who again checks them and then distributes the various papers that are to go to the shipper, to the consignee, to the bank, and so on. The completed folder then goes to the billing clerk who prepares the customer's invoice directly from the charge slip. The original copy of the invoice is then mailed, the carbon copy is sent to the accounting department, and the completed order, with all accompanying papers, is put into a folder for filing by order number. The complete order routine comprises about fifteen separate operations for each individual shipment. Figure 73 illustrates the foregoing order routine in graphic form.

**Procedure for handling policy loans in an insurance company.** Like the freight-forwarding concern whose order procedure was just described, an insurance company sells only service. Here again, however, there is a definite order-handling function to be performed, even though an order department as such does not exist in the organization. The following description of the procedure used in the handling of policy loans in a life insurance company of medium size is typical of how such "orders" are handled.<sup>6</sup>

The agency sees that the policyholder signs the proper form, and computes the loan from its records. The loan agreement and computation are sent in to the home office. All the clerks in the loan-calculation department help at the opening hour in making out requisitions for essential information, and their work receives priority in the card department. Within half an hour

<sup>6</sup> Reprinted by permission from *The Office Supervisor* by Niles and Niles, published by John Wiley & Sons, Inc.

the information has arrived, and is matched up to the papers by a junior clerk. Meanwhile the clerks have gone on with work left over from the preceding day. When the data are secured, the papers on the case are passed to a trained calculator. She makes an independent calculation, using the home-office records, and compares the result with the figure computed at the agency. In the case of disagreement a checker receives the papers. Cases of more than a certain amount are tagged. All cases then pass to one of two clerks who specialize in titles, and who go over the papers to see that the signatures agree with the home-office title record. Any doubtful cases are referred to the division head. Tagged cases are gone over by a senior clerk, to insure accuracy on cases where the financial obligation is large. The papers are then sent to another division, where the loan check is prepared.

## CHAPTER XII

### *Office Management in the Sales Department*

The average salesman looks upon his home office as a place where sales records are kept, where sales quotas are planned for him, and where numerous business conferences take place; to him it is a beehive of system and efficiency. He knows that things are filed away properly, and that he can well be proud to bring a prospect there because the office will make a favorable impression upon him. Lowered margins of profit, increased competition, and other equally important developments have made it essential that the most careful attention be given to the development of efficient methods of sales management.

**Reliance of the sales department upon records and reports.** Records and reports constitute the primary means whereby the sales manager and the sales department at the home office keep in touch with salesmen and customers. The sales manager, through a system of daily, weekly, and monthly reports sent to him by his representatives in the field, exercises control and renders decisions almost entirely by means of these documents. In fact, so easy is it to manage the sales force in this way that there is a very real danger of its being carried too far. Of necessity, however, the sales manager depends to a considerable extent upon reports of others for his information about conditions in the sales field.

**Organization of the sales department.** Lack of space prevents more than brief reference being made to ways in

which sales activities may be organized. All firms take into consideration, to a considerable extent, the geographical division of the sales territory. Some have district sales managers, each of whom are in charge of a specified territory and all of whom usually report directly to the sales manager. Other concerns, in addition to the geographical basis of exercising sales control, emphasize the various items or products in the line through the designation of certain individuals as product managers. Each of the product managers devotes his entire time to developing the sale of his particular product, no matter in what geographical area it may be sold. Still other companies establish selling agencies in different parts of the country and appoint local agents as their direct representatives. In addition to these methods, there is the type of organization commonly used in the retail business and to a considerable extent also in the wholesale field, in which the buying and selling functions are combined and referred to as merchandising.

Obviously the exact nature of the sales records and reports needed depends to a considerable extent upon the kind of sales-organization structure under which the company is operating. In practically all cases, however, there are certain fundamental records which it is absolutely essential to keep.

**Prospect records.** Two important functions of the sales department are to supply leads to salesmen and to see that prospects are properly followed up. The essentials of a practical prospect-file and follow-up system are that the plan works automatically, and that it provides for a definite check on results.

#### **Procedure followed by Chevrolet Motor Company.<sup>1</sup>**

Chevrolet believes that a salesman's calls should be planned. A dealer's salesman is required to list, on a separate card (Figures 74 and 75) every prospect. In doing so he must tell how each prospect was found. Should the cards turned in by a poor

<sup>1</sup> "Why Chevrolet Never Forgets a Prospect," *Management Methods*, June, 1932.



salesman indicate that his few prospects were found through personal friends, the dealer can send that salesman calling on owners of previous models. Some of these owners will be thinking of new cars; others, still satisfied with their old cars, will be Chevrolet boosters who can tell of friends who might buy a car; and from these calls the salesman will get prospects he otherwise would have missed. Again, a mediocre salesman may turn in cards showing that he never gets prospects from the salesroom

5 POINT PROSPECT CARD																															
<b>FIVE WAYS TO FIND PROSPECTS</b>  <input type="checkbox"/> ON THE SALESROOM FLOOR  <input type="checkbox"/> FROM YOUR FRIENDS  <input type="checkbox"/> FROM CAR OWNERS  <input type="checkbox"/> FROM COMPETITIVE OWNERS  <input type="checkbox"/> BY COLD APPROACH  <b>NOTE - CHECK WHERE YOU FOUND THIS PROSPECT</b>										PROSPECT _____ SALESMAN _____																					
										RESIDENCE ADDRESS _____										TELEPHONE _____											
										BUSINESS ADDRESS OR PLACE OF EMPLOYMENT _____										BUSINESS OR OCCUPATION _____											
										MAKE OF CAR OWNED _____										TYPE _____				YEAR _____				MODEL PREFERRED _____			
										PROSPECT'S VALUATION OF PRESENT CAR _____										SALESMAN'S VALUATION OF PRESENT CAR _____											
REASON FOR NOT GETTING THE ORDER _____																															
WHEN DO YOU THINK PROSPECT CAN BE CLOSED _____																															
REMARKS _____																															
_____																															
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31																															

Fig. 74.—Chevrolet Prospect Card (Front).

floor. In that case the dealer can drill the salesman in the proper way to talk to people who are "just looking."

In making out a prospect card, the salesman must enter the prospect's address, telephone number, and occupation—information that is essential in following up. The salesman must also tell the make, type, year, and valuation of the prospect's present car. The prospect should be asked how much allowance he wants for his old car. To get all this information a salesman must lead his prospect a considerable distance along the road toward a sale. And it is because the prospect card assigns to the salesman the duty of getting this information, that the salesman talks not idly, but along paths to sales.

On the bottom of the prospect card is a space for the salesman to check the date of his next call. After a card is turned in to

the dealer it is filed according to that date, and on that date returned to the salesman.

Chevrolet has found that there are five ways to sell an automobile. The first is to take a prospect for a drive. At the end of the demonstration ride the salesman should ask for an order—or for permission to make an appraisal, which is the first move towards closing a deal. Should the prospect refuse to say “yes,” the salesman proceeds undaunted to the second method of sell-

FIVE WAYS TO SELL PROSPECTS		REPORT ON PROGRESS OF SALE	
		SPECIFY REASON FOR NOT GETTING THE ORDER AFTER EACH STEP	
<input type="checkbox"/> ROAD DEMONSTRATION DATE _____		REASON FOR NOT GETTING ORDER _____	DATE OF LAST CALL _____
<input type="checkbox"/> ALBUM DEMONSTRATION DATE _____		REASON FOR NOT GETTING ORDER _____	DATE OF LAST CALL _____
<input type="checkbox"/> DIRECT MAIL DATE _____		REASON FOR NOT GETTING ORDER _____	DATE OF LAST CALL _____
<input type="checkbox"/> PROSPECT TO SALESROOM DATE _____		REASON FOR NOT GETTING ORDER _____	DATE OF LAST CALL _____
<input type="checkbox"/> APPRAISAL S DATE _____		IS HE A USED CAR PROSPECT _____	WHAT MAKE AND MODEL _____ PRICE PROSPECT EXPECTS TO PAY _____
NOTE:—CHECK PROGRESS OF SALE ABOVE AND SHOW DATE OF CALL.		REMARKS _____ WHAT CAN HE PAY DOWN _____	

Fig. 75.—Chevrolet Prospect Card (Back).

ing, and, if necessary, to the others. As the climax of each attack, the salesman asks for the order. In this way the salesman is not rebuffed by the first “no”—instead, he uses five different methods of closing. One of the selling methods is the use of a direct-mail campaign. The company requires each salesman to send in the names of ten prospects every week. At two-day intervals the prospect receives three mailing pieces. Thus the printed word and printed pictures re-enforce the salesman’s arguments. Then the salesman appears again with his request for an order. On the back of the prospect card are spaces for the salesman to note his progress as he uses all five methods of selling an automobile. By watching this progress report, a dealer not only can check his salesmen’s methods, but he can also tell when to add his own efforts to those of his men.

### Prospect follow-up methods of the Cincinnati Planer Company.<sup>2</sup>

The sales follow-up records, which are kept by the use of tabulating equipment, are designed to show where, when, and why certain localities offer the best sales possibilities, and automatically to keep the company on its toes in following up every lead. At the top of the card there are spaces for recording the dates of follow-up letters, literature, salesmen's calls, and so on. In these spaces the number of the sales letter, or literature, is entered with the dates, so that the sales manager may determine at a glance just what has been sent to a customer and whether a salesman has called. Information entered on the body of the card proper includes the date the inquiry is received, the name of the agent, the name of the customer, location of the customer, remarks pertinent to the inquiry, name of the product the prospect is interested in, and the quoted price.


As inquiries are received they are turned over to the sales department, where the quotation is figured and transmitted to the potential customer or to the agent in whose territory the inquirer is situated. Carbon copies of all proposals are given to a clerk who prepares the cards. They are then passed to the clerk who operates the sorting and tabulating equipment for punching. These cards are then sorted, first for the date received and the product. Then they are sorted and tabulated by agents. The result is a daily, weekly, or monthly statement for the sales manager of all inquiries received, classified first by products, then by agents or territories.

When a sale is made, the quotation or follow-up card is removed from the open file, and the date of the order entered. The cards are then filed in a closed file and are tabulated, every day, week, or month as the sales manager directs. From these records the percentage of orders received from inquiries, classified by products and by territories or agents, can be ascertained definitely at any time. The value of such records to the sales manager is obvious. He can give his attention to the agents who are falling down, concentrate on the territories that seem to be the least productive, and determine easily which products are selling and where they are selling. A correlated record is also kept showing "lost deals," the reasons therefor, the name of competitor receiving the order, and similar sales statistics, whenever they are available.

<sup>2</sup> "Sales Follow-up Record," *System*, November, 1931.

"S.O.S." reports of the Petroleum Heat and Power Company of California. An interesting and practical method whereby the home sales office can assist individual salesmen in turning prospects into customers is used by the Petroleum Heat and Power Company of California.<sup>3</sup>

<sup>3</sup> "The Office Back of the Salesman," *The Office Economist*, January, 1932.



SPECIAL COOPERATION NEEDED

Salesman \_\_\_\_\_ City \_\_\_\_\_ Date \_\_\_\_\_

**Instructions:** Be complete but concise. If your correct survey and cost analysis show that prospect would actually benefit substantially by our equipment installation, then very clearly he should be sold. If we don't sell him it's our fault. It is only a question of the right diagnosis of objections and convincing presentation of facts.

Prospect (List all individuals influencing job and summarize their attitude) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Address \_\_\_\_\_ Type Building \_\_\_\_\_

Type Boiler \_\_\_\_\_ Type Heating Plant \_\_\_\_\_

Cost Analysis \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Gas Equip't Quotation \_\_\_\_\_

P.G. & E. Quotation \_\_\_\_\_

Competition \_\_\_\_\_

Obstacles to be Overcome \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Space Below for Sales Manager and Vice-President only.

\_\_\_\_\_

Fig. 76.—"S. O. S." Prospect Form.

When the salesman handles a very difficult prospect and finds that he needs assistance to complete the sale, he fills out an "S.O.S." blank and submits it to the sales manager. The latter studies the details, notes his constructive suggestions, and then refers the form for the personal attention of the Vice President and Sales Manager. All the "S.O.S." reports are filed systematically, so he can work on them as time permits. Through this form of office follow-up the company has closed deals that the salesmen have given up as hopeless. The inevitable result has been that the salesmen have more courage to approach the most difficult of sales prospects, no matter how strong the odds against them, knowing well that they can depend on the active backing of the office organization to surmount the hurdles.

The "S.O.S." report does not become merely a subject of objective study, to be talked about at numerous conferences and then hidden away in some obscure pigeonhole. Instead, it is filed for instantaneous attention.

As a rule, the office has a great many contacts that can be capitalized for just such emergencies, but of which the salesman is not usually aware. There are friendly contractors to whom good turns have been done in the past, and who would appreciate the opportunity to reciprocate. There are others so situated that they can assist in approaching the most difficult prospects.

In filling out the "S.O.S." form the salesman is required, first of all, to list the names of the individuals who influence the job and to include a detailed statement of their attitude. This is followed by an analysis of the products, a cost analysis, quotations of competitors on the same products, and an account of the obstacles to be overcome.

There are two ways in which we can often help the salesman, first, by getting in touch with an individual who, we believe, is in a position to influence the judgment of that prospect, and secondly, by acquainting the other salesmen with the facts in the hope that at least one of them might have more knowledge of the prospect through previous contact or could suggest a way of breaking down sales resistance. In more than one instance the volunteered coöperation of the other salesmen on the force has helped to close important deals. It goes without saying that a finer spirit of coöperation has sprung up among the men, which in itself would justify all of the effort spent in developing this contact system.

As is customary in this line of business, salesmen submit to prospects the usual specifications and proposals, those applying

to home and commercial heating installations. A time-honored practice is to get up a neatly typewritten sheet, which looks very businesslike, but, as a rule, lacks individuality. When similar specifications are received from many other concerns it is indeed advantageous to use a form that stands out in the pile on the desk and simply begs for attention.

So we devised a special folder cut of fine paper stock in three different colors, depending on the class of prospect to be reached. If the salesman contacts the housewife who desires to purchase heating appliances for her fine home, he will usually submit the proposal in a pink or light blue folder. But if the prospect happens to be a building contractor or some other individual accustomed to handling such bids in great numbers, the salesman will most likely enclose the specifications in a terra cotta colored folder which is capable of standing a lot of use in a busy office without becoming easily soiled. In reporting on a prospect, the salesman as a rule accompanies his request with the notation that we in the office prepare the proposal in either pink, blue, or terra cotta colored folders to suit the particular case. And the office is always glad to coöperate with him in this respect.

The prospect's name is neatly inscribed on the first page of the folder, which is all the more attractive because of the simple but effective border design and the monogram appearing in the upper right-hand corner. On the first inside page we run attractive advertising copy of our establishment, and on the last page pictures of our showroom and of our sales and service staffs. The proposal sheet and other necessary correspondence is kept in place by a flap. Here we also enclose various manufacturers' folders and other pieces of advertising relative to the products which are mentioned in the specifications submitted to the prospect.

The salesmen appreciate the amount of attention that the office gives to the preparation of proposal sheets, for it enables them to make a better impression with their prospects. They feel that whenever they submit a proposal to a prospect they actually carry with them the personality of the house.

**Salesmen's reports.** One of the primary interests of every sales manager is the amount of business which his representatives in the field are securing. Consequently, one of the fundamental records of the sales department is the salesman's report, which shows specifically and in de-

tail just what each salesman is doing. Practice varies as to the particular method of securing this information from the salesmen. Some companies require a daily report from each salesman containing the names of customers and prospects visited, the results secured, and so on. Other concerns ask that this same information be submitted weekly rather than daily. Still other firms supply their salesmen with customers' record cards, one card for each customer, and ask that the salesmen note the results of their visits on these cards and send them to the office as the calls are made. In other cases the daily or weekly expenses of the salesmen are shown in designated columns on the same form on which the reports of calls are entered. The items commonly found on salesmen's reports are:

1. Name of customer or prospect.
2. Buyer's name, initials and title.
3. Full address.
4. Date of call.
5. Consumption capacity.
6. Competitive conditions.
7. Basis of competition.
8. Price quoted.
9. Orders.
10. Suggested follow-up.
11. When next call should be made.

Whatever details the report may contain, the primary object of the salesmen's reports is to give the sales manager a specific and rather detailed report on each customer or prospect. Ample space should be left for the insertion of any information about the customer's or prospect's present or future business or plans that will be of practical usefulness to the sales department. Under this heading might be such a notation as, "Does not need any more office equipment now but is planning to open a branch office at Albany, N. Y., about April 1, and will be in the market for a complete set of furnishings for it sometime during the first part of March."





over 95 per cent of the sales made were to customers who bought over \$100 worth of goods per year. Further study along this same line brought out the fact that, although only 6 per cent of the customers bought more than \$1,000 worth of goods yearly, nevertheless, this 6 per cent bought 85 per cent of all goods sold. The value of such information in planning sales campaigns and in systematizing efforts to reduce selling expenses by concentrating on the most profitable customers is obvious. Every sales manager should regard sales statistics, not as an evil to be avoided if possible, or at most to be put up with grudgingly, but rather as a means by which much valuable information may be secured.

#### Sales records used by Canada Dry Ginger Ale, Inc.<sup>4</sup>

Canada Dry's sales control flows from three basic records in visible card form. One set of cards (the upper card in Figure 78) records sales to retailers; another (the center card) sales to jobbers; and the third (the lower card) sales by cities.

With some salesmen, the retail sales record has increased calls per day as much as 30 per cent; of course it has increased sales. The cards—one for each retail customer or prospect—are arranged in order according to street location and each card is given a call number. Salesmen call on customers in sequence, according to call numbers, twice a month. From daily call reports, the sales are posted. At the same time a diagonal line—red if a sale was made, otherwise black—is drawn in the appropriate monthly block on the visible margin of the card. The result is that it can be ascertained at a glance whether or not the territory is covered regularly, and lists of customers who buy irregularly can be drawn off rapidly.

The second set of card records includes a card for each jobber. The card color reveals the classification—white, wholesale grocer; fawn, chain stores; canary, railroad and steamship; salmon, wholesale coöperative; green, export. On the card face, at the right, is an analysis by products of sales each month; at the left, for comparison, there is a similar analysis for each month of the preceding year. Sales for each of the last six

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<sup>4</sup>“How Sales Records Intensify Selling,” *Management Methods*, January, 1932.

years are in a lump sum. As with the retail card, there are spaces to record salesmen's calls. On the visible margin in the numbered blocks are: (1) City, (2) Customer's name, (3) Type of business, (4) Customer's rating, (5) Street address, (6) Zone. The four blocks on the extreme right of the card indicate the type of product the customer is buying; "Q" represents quarts,

[illegible]

Fig. 78.—Sales Records Used by Canada Dry Ginger Ale, Inc.

"L" represents lime, "O" represents orange, "G" represents golden. These are blocked out with permanent signals. On the reverse side of this form are such data as routing, special billing, names of executives, remarks, and so forth, which are necessary to maintain amicable relations with the customer.

The third sales record—that by cities—is coordinated with a city quota plan. The illustration (Figure 78) shows the ar-

rangement of the sales data by months and by products. The clerk posting to this record notices when a city is falling below quota and signals it for investigation. Cards are placed in visible cabinets where, at a glance, cities falling below their quota can be noticed and action taken. This record guides the company in synchronizing advertising and sales effort and also provides much helpful material for various statistical studies.

**Territorial records.** Inasmuch as the sales representatives of most companies are more or less constantly on the road covering the territories that have been assigned to them, it is important that the sales office have records that will tell exactly not only what territory each salesman has, but also the exact or approximate location within the territory of the salesman on any given day. For the purpose of setting forth the location of different territories, the sales manager usually has on the wall of his office a rather large map on which the territories are clearly marked, either in ink or in colored crayon. In the center of each territory there may be placed a number. A simple code pasted in the lower right-hand corner of the map shows the name of the salesman covering each territory as numbered on the map. Sometimes, too, other information in regard to the territories, such as the sales quota for the year, the potential customer population of the territory, and so on, may be shown on the same map.

The use of charts such as these in the office of the sales manager of the Chevrolet Motor Company is described as follows<sup>5</sup>:

On one wall was a chart listing every key city in the United States. Round tabs, one for each month in each city, were pasted on the chart. They were of three colors—red, yellow, and green. A red one indicated that Chevrolet sold less than 30 per cent of the automobiles vended in that town. A yellow one showed that Chevrolet did between 30 and 40 per cent of the total business, and a green one testified that Chevrolet did better than 40. The exact percentage was written on each tab.

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<sup>5</sup> *New York Sun*, November 24, 1936.

Merely by looking at this chart the sales manager can tell just what Chevrolet is doing in any part of the country, whether sales are increasing from month to month, or decreasing, or remaining static. It may be said that there were hardly any red spots and enough green ones to make the yellow ones look like buttercups in a meadow.

There are other charts, dealing with the used-car market, one of the biggest problems in the industry, and one on which Chevrolet has done a tremendous amount of work. In most cases you have to take on a used car before you can sell a new one, and the more help the parent company gives its dealers in this matter the more business will be done.

Commenting on this form of control the sales manager said: "Chevrolet has made surveys in every town in which we have a dealer. We know how many cars that town can handle, how the money is made, how much of it there is. We have the whole picture, and we set up our city quotas on the basis of it. We get the best dealer we can in each town, and tell him that he'll be protected. We tell him the set-up for that town, and he knows exactly what we are going to do.

"He knows that we won't spring a couple of new dealers on him without warning. Of course, if our dealer can't do the job, out he goes, and we'll get one that can, but as long as he comes through he'll have our absolute support and coöperation. The only way an organization can be made efficient is through happy, satisfied dealers. Arrange things so they are assured of a permanent job and a good profit as long as they produce, and you've automatically got loyalty and real service.

"As for the number of dealers, suppose our man does 40 per cent of the business in a town of 50,000 people. It's all his. But what if there were four Chevrolet dealers in that town? If they were equally good, each would get 10 per cent of the business, and none of them would make a fair profit. Also, with a limited number of potential customers, they'd be cutting each other's throats."

**Salesman's route cards.** In order that the sales manager may have a record showing where each salesman is in a territory at any given time, a simple report form showing the anticipated route of the salesman during a given period in the future, usually a week, often is used. This report may be sent in by the salesman each week with his report of calls and his expense account. On this report will be

Name _____			
Day	Date	City & State	Hotel
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

Fig. 79.—Salesman's Weekly Route Card.

shown the salesman's name and below, in columnar form, the dates of the coming week, together with the name of the town and the hotel where he expects to be each day. The use of such a report enables the sales manager to get in touch easily and quickly with any of his men if the need arises. A copy of this same record is also sent to the mailing department to be used by it in sending mail to the salesmen on the road. Incidentally, such a report is useful to the sales manager in that it shows him at once whether his men are covering all the communities that they should visit, or whether, as is sometimes the case, especially where a lax system of sales control prevails, the men are going only to the larger towns and neglecting the smaller ones. Figure 79 shows a copy of this report.

Item	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total	Remarks
Hotel									
Meals									
R.R. Fare									
Pullman fare									
Excess Baggage									
Auto Hire									
Miscellaneous									
Total									
I certify that these expenses were incurred by me.									
									Salesman _____
Reimbursed by check No. _____			Approved _____			Approved _____			
Date _____			Salesmanager _____			Auditor _____			

Fig. 80.—Salesman's Expense Account.

shown the salesman's name and below, in columnar form, the dates of the coming week, together with the name of the town and the hotel where he expects to be each day. The use of such a report enables the sales manager to get in touch easily and quickly with any of his men if the

Salesman's weekly expense account. The salesman's weekly expense account has already been referred to incidentally in a previous paragraph. The writer has yet to see two such records that are exactly alike. In general, however, the purpose of the expense account is to ascertain the total amount spent

by the salesman and to classify this total by type of expense. Thus, there will be separate columns in which are entered the amounts spent for railroad fare, Pullman fare, excess baggage, and cartage charges (where salesmen carry sample trunks), for hotel bills, for meals, for auto hire, for miscellaneous items, and so on. Some companies ask that

receipts or vouchers be submitted to substantiate certain items shown on the expense account. Figure 80 illustrates this record.

**Records of sales estimates and quotas.** One important set of records of the sales department has to do with sales estimates, quotas, and budgets. Sales quotas are often based on more or less detailed market surveys or analyses. The translation of these figures into the final sales budget includes many necessary adjustments that must be made to suit the requirements or restrictions of the other departments of the business, such as production, finance, and so on. Setting sales quotas and making up the final sales budget constitute a problem too great and complex to be treated here. Even the records that are involved can be indicated only very briefly. The data upon which sales quotas are based should include an estimate, submitted by the salesman himself, regarding the sales possibilities in his territory. These figures must be totaled and analyzed by the district sales managers and reports, containing suggested quotas, must be sent to the general sales manager. On these reports a tentative sales estimate or statement of what the sales department thinks it can sell, in terms of volume and of value, during the coming period is prepared. These figures are then submitted to the various other departments of the business, after which they are revised before being finally approved. When this final approval is received the whole process is repeated in reverse order with a view to arriving at a definite quota for each salesman. During the period covered by the quota, frequent comparisons must be made between estimated sales and actual sales. Unforeseen conditions may arise—and in practice do arise with annoying persistency—which make it necessary to revise the quotas or estimates during the period. All of these activities require the making and the keeping of numerous records and reports by the sales department, as well as by other departments.

**Reducing returns through proper records.** The problem of returned goods is one with which every business

must deal. In some lines of business it is, fortunately, not an especially serious one; in other concerns the ability to hold down returns to a reasonable figure may spell the difference between profit and loss. The returned-goods evil is particularly important and difficult in the retail business, and it is therefore especially interesting to find that La Salle and Koch, of Toledo, Ohio,—a leading midwestern department store—did solve it successfully, and depended considerably on records and reports in order to do so.<sup>6</sup>

The percentage of returns to net sales is a serious problem in the retail business. A general country average of 14.9 per cent in 1929 climbed to 17 per cent in 1930. Our returns however fell from 11.2 per cent of net sales in 1929 to 10.7 per cent in 1930. The reduction was achieved in spite of two adverse factors that normally increase the percentage of returns—an increase of out-of-town business (in our case 80 per cent in those two years), and the depression.

We attribute that showing to methods that attacked the problem from the inside. We proceeded on the theory that store management should be the principal point upon which to consolidate our attack. Against the barrage of returned goods we erected a barrier of forms. Through the forms we analyzed the reasons for returns. We reinforced the weak points indicated by the records. We started a counter-offensive of employee education along preventive lines. And through more forms we followed up the effectiveness of our campaign.

Department stores have used most commonly the plan of "customer education" in an endeavor to check the loss of profits that accompanies the returned-goods evil. The meager beneficial results from attempts at customer education indicate that the cost of that method of attack is out of proportion to the benefits. In itself the method is dangerous. Customers resent any reflection on their manner of purchasing. Like a sensitive nerve, it may be touched with the greatest caution. A second procedure is comparatively new, and sufficient results are not yet available to establish its efficacy. Under that procedure, retail stores in any community establish a returned-goods bureau through

<sup>6</sup> "Records that Cut Returned Goods by Per Cent," *System*, December, 1931.

which lists of chronic offenders are exchanged. Such a plan operates to cure a repetition of returns rather than to root out the evil entirely.

Our plan is based upon the assumption that the fault lies not with the customer, but with us—ergo, eliminate the cause. It is really very simple with only three focal points:

1. Intelligent selling.
2. Speed and thoroughness in adjusting complaints.

M1081

### BUREAU OF ADJUSTMENTS

Complaint No..... Date.....

Name .....

Address .....

Dept. Staff No.

Date of Sale

Cause:

Delayed

Short in Order

Wrong Address or Name

Poor Salesmanship

Illegibility

Check Lost

No Record Made of Sale

Wrong Mdse. Received

Wrong Price Charged

Short Changed

Cust. Own Goods Lost

Mdse. Lost

Del. to Wrong Address

Mutilated Address

Damaged Mdse. Rec'd

Disposition: .....

Refer to: .....

Signed: .....

Fig. 81.—Record of Complaint and Adjustment.



3. A continuing attack guided by permanent analytical and production records.

For the approach on the first objective we devised a simple form that detects and localizes the causes of complaints. The adjuster fills out an error slip (Form 1 in Figure 81), indicating the cause of each complaint—poor salesmanship (unsuitable selling, forced selling, negative selling), illegibility, short order, and so forth. The error slips are turned over to me by 4:00 P.M. each day, and the following day I interview every offender with a view to analyzing how the return might have been avoided. My office, as well as the employment bureau, keeps a duplicate of each error slip, and when any employee has been responsible for an excessive number of avoidable returns, the inevitable happens. The employee's permanent record is before me as I talk to each offender. Since the introduction of the error slip, the number of errors has fallen by about 8 per cent.

Employee education follows logically after detection and localization of the cause of complaints. We must eradicate the causes. Most causes for returned goods begin in the store. If a salesperson handles a sale intelligently, nine times out of ten the article will remain sold. Hence we concentrate our educational efforts on salesmanship. Demonstration lectures based on actual experiences gleaned from our adjustment records have yielded the most beneficial results. By constantly citing actual instances of poor salesmanship, by continuously stepping up our standard of salesmanship, we know that we have eliminated many of the causes of complaints. Our department heads have learned to take the longer view, and they are now more interested in net sales than in the day's total sales.

As a concomitant approach on the first objective, intelligent selling, we organized a central adjustment bureau. That bureau serves two purposes. It solicits customers' criticisms and is thus the tool for the detection of complaints and the direction of employee education; its adjusters are super-salesminded, and approximately one-third of the customers who come to the adjustment desk with full intention of returning an article are resold on the same article or one like it.

Of course intelligent selling is not the panacea for all returned-goods problems. There is always the customer who purchases merchandise merely to impress some friend who accompanies her, and the customer who orders wearing apparel, wears it one day, and returns it. Credits granted those customers are known as policy adjustments. Each policy adjustment is noted on a

policy card (Form 2 in Figure 81). When a customer has received three policy credits, her name is recorded on a special list, and when she asks again for an adjustment she is referred to the manager. At that point we resort to customer education. If that is ineffective, the account is closed. A significant feature that we feel justifies our diagnosis of the entire problem of attacking returns is that there are only fifteen names on the special list at the present time.

Toward the second objective in our plan—speed and thoroughness in adjusting complaints—we apply an attack of a routine that will expedite and assure proper handling of complaints, coördinated with daily reports and records of individual performance that guide supervision. A year ago our average adjustment required nearly 144 hours. Today 97 per cent of all our complaints are adjusted in less than 72 hours. The record of a week picked at random from last year's records shows 400 complaints received with 240 open at the end of the week. The same week this year shows 342 complaints with 40 left open. An equivalent amount of work is now handled by a force one-half the size of that formerly required.

Important in accomplishing that result was staggering the work. At 8:00 A.M. a register girl reports. She fills out a blank (Form 3 in Figure 81) for each complaint that has come in by mail, and routes the forms according to the type of complaint—delivery, bill, merchandise, or miscellaneous. The bill, merchandise, and miscellaneous-complaint girls report at 9:00 A.M. and find their work laid out for them, each job concisely stated on the form. Since delivery complaints generally are received over the phone later in the day, the girl handling that type reports at 9:30 A.M. The former haphazard manner of handling complaints that were received by the cashier's department with remittances on bills has been changed by the installation of a report form. Complaints are typed in triplicate and sent to the adjustment bureau. A description of each adjustment is entered on the forms, copies of which are then returned to the cashier's department and to my office with the result that there is no possibility of complaints being overlooked.

As a control of the work of the adjustment bureau, we receive a daily report of adjustments (Form 4 in Figure 81). Formerly the adjustment bureau prepared a weekly report of complaints received, adjusted, and carried over to the next week. The installation of the daily report was in itself one of the most important factors in speeding the work. We can now apply spurs in the proper direction and speed the pace before a serious

loss of time occurs. Daily production records of the individual clerks provide a more accurate check and enable us to apply corrective measures in cases of falling production before laziness becomes a habit.

For the third and final objective, a continuing and progressive attack, we use Form 5 (Figure 81). After a complaint is closed, the inspector checks and approves the disposition and fills out this permanent file record. From it she prepares an analysis sheet and a production sheet for each week. The analysis sheet reveals the types of complaint that are most prevalent and enables us to concentrate our educational measures where they are most needed. The production sheet sets up standards of comparison for guides in the forward planning of our program.

A suggested procedure for analyzing and improving sales department methods. As suggested on previous pages, one of the functional responsibilities of the office manager is the study and improvement of the office methods of the various business departments. The sales department is no exception; in fact, this department often offers particularly fine opportunities for such work. Bengé cites an interesting practical example of the way in which office methods were improved in a large sales department. In this division there were seven employees engaged in the following related activities<sup>7</sup>:

1. Recording the essentials of contracts between the company and its salesmen.
2. Studying sales potentialities and sales consummated by counties.
3. Recording sales of each salesman.

The position titles and brief descriptions of duties of the seven clerks were as follows:

1. Assistant contract clerk—sorts mail, prepares contract papers for signature, verifies territory assigned new salesmen.
2. Contract clerk—briefs terms of contract, enters data of new employees in personnel register, records contract, prepares the contract and commission cards for files.
3. Assistant sales-analysis clerk—maintains sales map, keeps chart book up to date, revises county figures of population, auto registration, etc., and types monthly sales analysis.

<sup>7</sup> Bengé, Eugene J., *Cutting Clerical Costs*, p. 105. McGraw-Hill Book Company, Inc., New York, 1931.

Date March 31, 19

Name of clerk interviewed Miss E. Smith

Department General Sales

Division Daily Sales

1. *Supervises daily posting.*

Organizes and directs the work of two bookkeeping-machine operators who post daily from sales tickets to salesmen's cards, (see Exhibit A) accumulating figures on number of cars and amounts sold, daily, month to date, and year to date.

2. *Maintains a monthly record.*

Maintains a 5 by 8 inch monthly record of sales (see Exhibit B), which provides for monthly entries for 4 years. There is one such card for each salesman. Posts from the cards of salesmen to this monthly summary record and refles monthly records according to territories. This record shows for each month the number of autos sold, the amount of money paid down, and the amount of credit toward convention attendance, based upon a weighting system for different kinds of cars. This card also provides spaces for annual totals of 4 years prior to current year.

3. *Prepares bulletin of honor men.*

This bulletin (see Exhibit C), issued monthly, contains four lists:

1. First 100 producers according to autos sold, during month.
2. First 100 producers according to amounts sold, during month.
3. First 100 producers according to autos sold, year to date.
4. First 100 producers according to amounts sold, year to date.

About twenty-sixth of each month, goes through daily bookkeeping-machine records of salesmen, using the lowest amounts of honor men during month previous as rough standards, and looks for probable honor men according to autos and amounts for the month. Maintains a dual file of 3 by 5 in. cards (see Exhibits D and E) for temporary recording of these entries in pencil, withdrawing the proper cards from the two main files. On each, further records the number of times the salesman has appeared on previous monthly lists.

Also looks over daily cards for names of salesmen who might be included on year-to-date lists because of high sales during previous months, despite small sales during current month.

Cards finally withdrawn show those which, in all probability, will embrace the names of the honor men for monthly autos and amounts; also a few for the year-to-date honor lists.

Also maintains two additional files for year-to-date figures:

a. A 3 by 5 inch yellow card on which is shown the name of the salesman and amount of sales, year to date; withdraws proper card when required (see Exhibit F).

b. Honor card, a printed 3 by 5 inch white card (see Exhibit G), on which is recorded the number of automobiles sold, year to date. Later in month, the three other factors used in honor lists are permanently entered upon this record.

Ranks each set of monthly cards, 1 to 100, for first two lists of honor men. Gives ranked cards to typist for typing of the two lists (see Exhibits H and I). First list shows rank, name of salesman, number of times appeared on last year's list, territory and number of autos sold; second list includes the same items except amount of sales during the month is substituted for number of autos. While these two lists are being prepared, works up year-to-date records, which are more difficult.

To compile year-to-date lists, (see Exhibits J and K), goes through the salesmen's file and "staggers" cards possibly to be included. Enters in pencil on yellow cards the sales amounts, year to date, and on white cards the number of autos sold, year to date. Arranges the two sets of cards by rank, 1 to 100, and gives to typist for preparation of lists which are similar to the two previous lists except figures are for year to date. In the final printed copy, amounts are omitted, but are here included for the information of executives to whom carbon copies of the lists are sent in advance of the printed bulletin.

When typist returns lists, checks them for accuracy in typing and sends to the purchasing department for transmittal to the printer.

From carbon copies of lists, transcribes names of those appearing on any list for the first time and submits these names to the purchasing department as a requisition for bronze lapel buttons. When the buttons are received, distributes them to the respective salesmen (see Exhibit L).

Upon the permanent honor card, inks in the pencil entry of autos sold and enters the three other figures from carbon copies of lists. Refles all cards withdrawn from the various files and files copies of lists.

Fig. 82.—Analysis of Work of Sales Record Clerk.

4. Sales-analysis clerk—compares commission rates and totals with contract terms, analyzes buying power of territories, reviews earnings of salesmen, and conducts special studies.

5 and 6. Bookkeeping-machine posters—from daily records of sales, posts credits to respective salesmen's cards; also accumulates upon proper territorial cards.

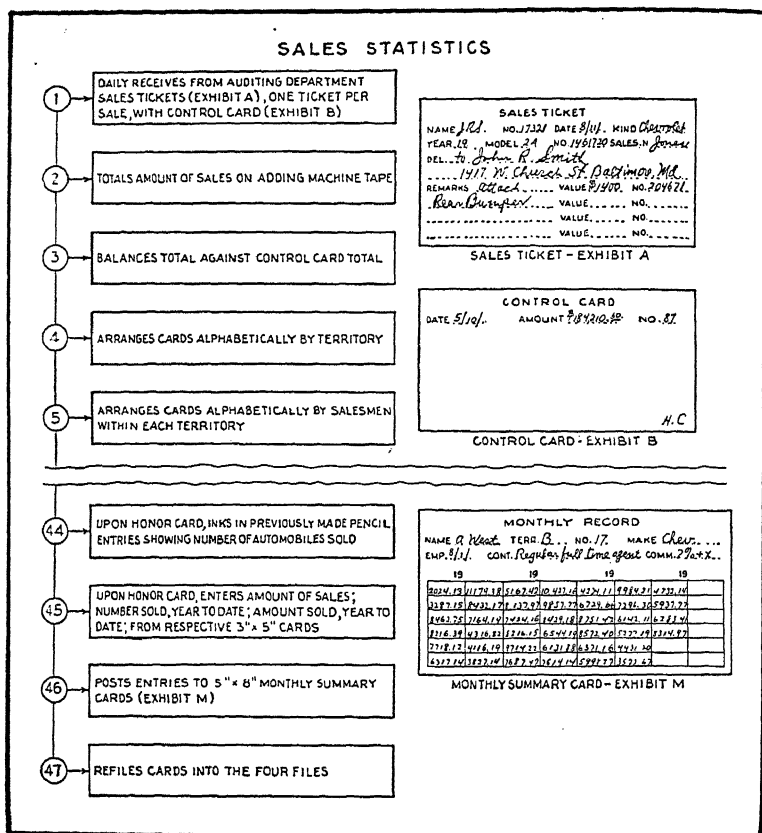


Fig. 83.—Chart of Clerical Routine.

7. Sales-record clerk—supervises bookkeeping-machine posters, makes adjustments of credits where necessary, and prepares monthly lists of 100 highest producers, number of cars sold, and amount of sales.

The duties of each of these seven people were analyzed and

recorded in great detail. For example, the analysis shown in Figure 82 was prepared for the sales-record clerk.

Three clerical routine charts were prepared for contract, sales-analysis, and sales-recording activities. As indicated in Figure 83, copies of actual forms were included in these wall charts, each of which was approximately three feet wide by ten feet high. Following the preparation of the charts, each step and each form was scrutinized carefully to answer such questions as:

1. Is it necessary?
2. Could it be combined with some other step or form?
3. Could it be produced better at some other point, or by some other means?
4. Is the sequence of steps correct?

Note the following portion of such an inquiry, which lists sequentially certain steps in the sales-statistics routine and gives a digest of the reasoning applied to each step.

### PRESENT ROUTINE OF COMPILING SALES STATISTICS

With Critical Comment of Each Step.

<i>Step</i>	<i>Comment</i>
I. Sorting of sales tickets:	
1. Daily receives from auditing department, sales tickets (Exhibit A), one ticket per sale, with control card (Exhibit B).	1. Stet.
2. Totals amount of sales on adding-machine tape.	2. Elimination. Auditing department has just totaled the cards before sending them to this department; control-card total should be correct. (See 3.)
3. Balances total against control-card total.	3. Revise. The control card shows number of cards and total sales; if desired, count the cards and check number against control number, thus insuring against possible loss in transit.
4. Arranges cards alphabetically by territory (A, B, C, etc.)	4. Stet.
5. Arranges cards alphabetically by salesmen within each territory.	5. Stet.

## III. Posting of salesmen's cards:

13. With bookkeeping machine posts daily from sales tickets, crediting salesmen cards.

13. Eliminate. Investigation reveals no need for daily posting with its uneconomical handling of hundreds of cards, picking up previous totals and posting new totals. Monthly totals only are needed, but they are required promptly. During the month, file sales tickets by salesmen; during last few days compute a sub-total for each salesman by use of a non-listing calculating machine (which is speedier than either a listing, adding, or bookkeeping machine). On last day of month, add in few remaining cards to obtain monthly totals for all salesmen.

The simple reasoning applied against Step 13 permitted the elimination of two bookkeeping machines and one of the two operators in exchange for a calculating machine, which was required by the remaining clerk for only five days per month.

The duties of each of the seven desks were subjected to a similar type of scrutiny, with the result that the following organization was set up:

- |                                             |                                                                                                                                             |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| and 2. Contract- and sales-analysis clerks. | The duties of contract- and sales-analysis divisions were merged so that two clerks were able to handle the previous duties of four clerks. |
| 3. Sales-record clerk.                      | Able to handle the simplified work which formerly required three clerks.                                                                    |
| 4. Junior clerk.                            | For mail opening and to assist other clerks at peak periods, so receiving training for all types of work.                                   |

To accomplish the merging of the duties of the contract- and sales-analysis desks and to bring together the three previously separate divisions, a rearrangement of desks was necessary. A floor-plan, flow-of-work chart revealed that papers flowed continually between the contract- and sales-analysis desks (separated by some thirty feet) and invariably back-tracked; the

sales-record unit situated fully forty feet away from the sales-analysis desk had frequent contact with that desk. A very simple grouping of the four desks and the necessary files was accomplished, thus greatly facilitating the handling of work and permitting the elimination of one entire file.

The net results of this analysis of the duties of seven clerks were:

1. Reduction from seven clerks to four.
2. Elimination of two bookkeeping machines by purchase of one calculating machine.
3. Elimination of a duplicate file of all salesmen.
4. Prompter furnishing of information.
5. More diversified training of remaining clerks.



## CHAPTER XIII

### *Office Management in the Advertising and Sales Promotion Department*

As in the case of the order and sales departments discussed in previous chapters, a very considerable amount of office management and record-keeping work is done in the advertising and sales promotion departments. Unlike most other departments, however, the precise duties and responsibilities of the advertising department vary rather widely with different companies. In addition, the way in which the work is divided between the advertising agency and the company advertising department obviously has an important influence on the nature and extent of the work to be done by the company itself. Before turning to a discussion of office management in the advertising and sales promotion departments, therefore, these matters must first be considered.

The place of the advertising function in business organizations. The place of the advertising and promotion function depends both on the nature of the business and on the particular situation within the company. In many manufacturing establishments the advertising manager is responsible to the sales manager. This arrangement is used not because the advertising manager is less important to the company than the sales manager, but because the sales manager is responsible for the distribution of the company's products, and, therefore, everything that aids him in distributing them successfully, including, of course, advertising, should be under his general supervision. In

some concerns close coöperation between advertising and sales is secured by making the advertising manager an assistant sales manager, and, in turn, making the sales manager assistant advertising manager.

In other industrial organizations advertising and sales promotion are two separate departments, although each necessarily works closely with the other. In such cases both the advertising manager and the sales promotion manager usually report to a director of advertising, who in turn may be responsible directly to the president. In still other cases, particularly in companies in which the nature of the product necessitates very close coöperation with the engineering research, patent, and technical departments, a central control committee consisting of the heads of the sales, production, engineering, advertising, and sales promotion departments, with the president acting as chairman, often formulates and directs advertising policy.

The essential task of the sales manager in a retail store is to promote successfully the merchandise offerings made available by the buyers and merchandise managers. In this case an important part of the work has to do with the promotional activities within the store itself, such as window dressing and display, counter display, signs, and so on. In the retail business the sales manager, who may report directly to the general manager or president, is usually responsible for all advertising and promotion activities.

Recently there has been a tendency towards the closer coördination of all the promotional contacts which an organization has with its customers, prospects, and the public by making one executive responsible for all such work. Thus, in some companies, the heads of the advertising, promotion, and press departments all report to a director of publicity. It seems likely, with the increasing attention being given by many companies to public-relations work, that there will be further developments in this direction during the next few years.

**The advertising agency.** Most companies, particularly

those which do national and regional advertising, use the services of advertising agencies. The extent of the responsibility that the agency takes for the advertising plans and policies of a company determines to a large extent the specific duties and responsibilities of the advertising department. In cases where the agency has almost complete charge of the advertising and sales promotion work of a concern, the work of the advertising manager may consist largely of maintaining the necessary contact between the company and the agency. In other instances, however, the advertising agency may advise only on policies of major importance, or is used primarily for the preparation and placement of advertisements in newspapers and magazines, and for the production of radio programs. In such cases there is obviously a need for an advertising executive within the company who will act not only as contact man between the company and the agency, but who also will head a department that will be responsible for doing a considerable amount of actual advertising work.

**Duties of the advertising and sales promotion departments.** As has been indicated, the specific responsibilities of the advertising departments vary considerably in different lines of business, and also with different concerns within the same industry. However, the following partial list of duties of the advertising department of the Bakelite Corporation indicates the practices of a representative industrial organization.<sup>1</sup>

1. *Advertising Appropriation*
  - a. Make recommendations to the executive committee
  - b. Allocate appropriations made by the executive committee
  - c. Calculate schedules
2. *Advertising Program*
  - a. Select subjects for advertising
  - b. Set up schedules of insertions
  - c. Assign copy numbers and compile copy schedules
3. *Policy Control*

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<sup>1</sup> *Organization and Operation of the Advertising Department.* The Association of National Advertisers, Inc., New York, 1937.

- a. Consult with sales department to keep in contact with new sales policies and to maintain coördination of advertising with sales departments
- b.- Prepare consumer literature and sales aids
- c. Contact advertising agencies
- d. Supervise copy, layouts, and engravings
4. *Research Work*
  - a. Compile data to determine future recommendations for advertising programs
5. *Copy*
  - a. Revise and approve all copy
  - b. Approve advance proofs of advertisements
  - c. Prepare monthly lists of advance closing dates
  - d. Follow agency for copy
  - e. Type copy for advertising committee and selected list
  - f. Obtain approved copy from committee and forward to agency, first being certain that copy has been approved by either advertising manager or his assistant
  - g. Record proofs of advertisements in card files
6. *Publications*
  - a. Check advertisements in publications and pass to advertising manager for approval
  - b. Note date of receipt of checking copies of publications containing Bakelite advertisements
  - c. Cut advertisements from magazines; maintain advertising scrapbooks
  - d. Check and file magazines
  - e. Route checked magazines to various branch offices
7. *Advertising Expenditures*
  - a. Check all invoices and indicate accounting distribution
  - b. Approve invoices
  - c. Check monthly expenditure reports
  - d. Check agency annual fee against actual expenditures
  - e. Check and record bills on card system; enter all bills on voucher register sheets
8. *Advertising Returns*
  - a. Supervise sending of form letters
  - b. Analyze returns
9. *Booklets, Catalogues, etc.*
  - a. Supervise preparation of booklets
  - b. Write and prepare copy from data received from sales and research departments
  - c. Check costs and supervise card recording system
  - d. Assign job numbers. Prepare copy cards for filing
  - e. Maintain record of booklets in stock
  - f. Transcribe and type manuscripts
  - g. Keep complete set of booklets and folders in advertising manager's desk

10. *Direct-Mail Campaign*
  - a. Supervise copy and layouts
  - b. Supervise assembling of photos and copy data
  - c. Supervise scheduled mailings
  - d. Prepare stencil cards for sales prospect file
  - e. Keep stencil file and "kill" card file complete with additions, corrections, and removals
11. *Reprints*
  - a. Note date of receipt on card system
  - b. Send form letters to manufacturer of products featured
  - c. Distribute letters to members of the Bakelite organization
  - d. Take care of scheduled mailings
  - e. File twenty copies of all reprints in permanent reprint file
  - f. Keep display chart in advertising manager's office up to date with latest reprints and direct folders
12. *Publicity*
  - a. Supervise all publicity activities
  - b. Contact editors of trade and business publications and prepare articles for those papers
  - c. Prepare articles and releases for members of the Bakelite Corporation. Edit articles written by other members of the organization. Prepare monthly sales letters for the sales department. Release information on new developments announced by the research department. Notify the press of lectures by Bakelite Corporation personnel, supplying, in advance, copies or excerpts of talks. Prepare captions for photographic releases
  - d. Prepare monthly issues of "Bakelite Information"
  - e. Type captions for news releases
  - f. Maintain publicity scrapbook; advertising manager's personal scrapbook
  - g. Maintain publicity-photograph files
  - h. Maintain publicity-release file
13. *Mail*
  - a. Open and distribute all mail addressed to the advertising department
14. *Correspondence*
  - a. Handle general correspondence
  - b. Handle routine correspondence—writing for stories, following-up; following sales department leads
  - c. Transcribe letters
15. *Purchasing (Requisitions for Orders)*
  - a. Approve requisitions
  - b. Follow receipt of goods
  - c. Check bills against orders
16. *Filing*
  - a. File correspondence and reference data, photographs, etc.

- b. Match up new correspondence; maintain follow-up system
  - c. Review all correspondence preparatory to filing
  - d. Maintain parts cabinets
  - e. Maintain "Market Data" file, securing statistical information for analysis and reference
  - f. Maintain Advertising Association's filing. Supervise filing of correspondence and reference data, photographs, articles, etc. Supervise the maintenance of the follow-up system and matching up new correspondence
17. *Mimeograph Work*
- a. Approve all mimeograph work
  - b. Cut stencils
  - c. Mimeograph specified number of copies
18. *Miscellaneous*
- a. Messenger service
  - b. Supervise and maintain office supplies and stock room; prepare monthly stock reports

**Departmental records.** The following sections describe the more important basic records used in the majority of advertising and sales promotion departments.

**Record of prospects.** One of the most important records of the advertising department is the prospect file and

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Name															Address																
Kind of Business															Source of Inquiry																
Follow-up	Date Sent	Sale				Dropped				Remarks																					
		Value		Date		Date		Reasons																							
First Letter																															
Catalogue																															
Second Letter																															
Folder																															
Third Letter																															
Fourth Letter																															
Fifth Letter																															

Fig. 84.—Prospect Follow-Up Card.

follow-up card. Such a record is used in connection with direct-mail campaigns, and also for the purpose of recording the follow-up work done with a prospect whose name has been secured as the result of an inquiry based on an

advertisement, or from other sources. The card will naturally contain, usually in the heading, the name, address, and business of the prospect, while the body may have a number of columns for recording information on what has been done and also for noting the final disposition of the case. Such headings as "First Letter Sent (date)," "Second Letter Sent (date)," "Folder (or catalogue) No. — Sent (date)," and so on, are used for recording information in the body of the card. Inasmuch as all correspondence with the prospect, of course, is filed separately, it is desirable that the prospect card have a space for a cross reference which will show where such correspondence may be found. When the time at which the various pieces of mail matter are to be sent out is important, or when it is desired to follow up a customer on a specific date in the future, the use of a small guide tab placed at the top of the card over the particular date will make the follow-up practically automatic. Numbers 1 to 31, each representing a date in the month, can easily be printed in a line across the top of the card for this purpose. Prospect cards are usually filed alphabetically according to the name of the prospect, although other methods of filing are sometimes used—for example, filing the cards according to the article or product in which the prospect is interested, and so on. Figure 84 illustrates one of the forms used for such records.

**Mailing lists.** Closely allied with the prospect card, and frequently the source from which names for prospect cards are secured, is the mailing list. While it is by no means an easy task to secure a really good productive list of names, there are several sources that may be used to advantage. A number of companies specialize in the business of compiling mailing lists, which they then sell to business organizations. Directories, club memberships, lists of magazine subscribers, lists of telephone subscribers, and many other sources are also widely used.

Mailing lists are usually prepared alphabetically, often

subdivided geographically by states, counties, and cities. The names themselves may be kept either on sheets of paper, in which case they are filed in the regular way under an appropriate heading, or on stencil plates or cards. The method best suited to a particular case depends largely upon the way in which the names are to be put on the envelopes or wrappers. If either hand or typewriter addressing methods are to be employed, the names may be listed on sheets. If, however, the list is to be run off on an addressing machine, the stencil plate is preferable. The latter method is really economical only when the volume of work to be done is large.

Every advertising department should also make some definite provision for a record on which employees of this or other departments may note possible new sources of names that come to their attention. Such a record may be made of considerable value, since it affords an opportunity to preserve for future reference specific suggestions that might otherwise be lost or forgotten.

**Records of advertising rates.** Just as a purchasing agent naturally wishes to have a record of the prices he pays vendors for various materials that he buys from them, so the advertising manager wants records of the cost of what he buys in large quantities annually, namely, advertising space and time. A record of advertising rates of all mediums in which advertising has been placed, as well as similar information about mediums that have not been used but which may be given favorable consideration later on, is an essential part of the system of records of the advertising department. Such information is available in catalogue or book form. For each newspaper and magazine the listing shows the name and publication address of the medium, total circulation, space rates for the various units of space which may be used, such as a full page, a half-page, a full column, a half-column, and so on, frequency of publication, rates for copy containing colors, and so on. Similar



data are compiled for all radio stations that sell time to advertisers. Many advertising mediums themselves also print rate cards containing the same kind of information.

**Record of advertising costs and results.** An advertising manager uses one medium or refuses to use another because of the results, or lack of them, that he obtains. For this reason he needs a record that will give definite information on returns in relation to their cost. A record of

Medium	Publication Date	Cost	No. of Inquiries	No. of Orders	\$ Value of Orders	% Direct Adv. Cost to Gross Sales	Remarks

Fig. 85.—Record of Advertising Costs and Results.

advertising costs and results by mediums gives this information. For example, the record may show that \$5,000 was spent on an advertisement in a particular medium on November 14. As the result of this advertisement, 450 inquiries were received. This may be de-

termined, in many cases at least, by keying each advertisement. If 150 orders were secured from these 450 inquiries, the direct advertising cost of securing the orders would be \$33.33 each. Although \$5,000 for a single insertion may seem high at first thought, the advertising manager, by reducing this figure to a unit-cost basis, is in a position to know whether a relatively few advertisements placed in this medium yield a better return on the investment than a similar number placed in another medium at a lower rate. While the use of such a record is limited to cases in which it is possible to identify inquiries through the use of key symbols, nevertheless, it furnishes an excellent basis upon which to judge the value of the results secured. Figure 85 illustrates one form of such a record.

**Record of results obtained by an advertisement.** Another record frequently used is one which gives information about the pulling power of various advertisements. It sometimes happens that a particular piece of copy or radio "commercial," which everyone in the advertising depart-

ment thought would "pull" extremely well, fails to justify itself when put to the test, while another, which may not have been considered so good, proves to be a huge success. A record that shows actual results obtained is one which many advertising managers find valuable. Inquiries and orders received from each advertising message which can be identified are recorded in much the same way that results by mediums are entered on the record just discussed.

**Use of such records in retail stores.** Records similar to those just discussed are especially useful in retail stores. Mr. Paul E. Murphy, advertising manager of Frederick Loeser and Company, a large department store in Brooklyn, speaking at the 1937 convention of the National Retail Dry Goods Association, recommended the creation of an effective but not elaborate record of advertising results which would show the date of the advertisement, item, price, direct sales cost, total department sales, space, newspaper, cost of space, and direct advertising cost. Such a record, he averred, would enable stores to avoid last year's mistakes and to duplicate last year's successes.

**Stock record of advertising literature** A stock record for each type or kind of advertising literature should also be kept, in order that the advertising manager may know at all times the quantities of the various sorts of advertising material, such as letters, folders, and booklets that are on hand or on order. The form and use of a stock record card for keeping track of advertising literature and supplies is very much the same as that used in recording the receipt, disbursement, and quantity on hand of raw materials, or of finished products, which is discussed in detail in Chapter XIV.

### Procedure and records of the Bakelite Corporation.<sup>2</sup>

In this company the advertising manager is responsible for all activities. He has two chief assistants, one directing what

<sup>2</sup> Adapted by permission from *Organization and Operation of the Advertising Department*, Case Study Number One, Bakelite Corporation, The Association of National Advertisers, Inc., New York, 1937.

is termed "sales promotional activities," and the other, "production." These share a secretary whose duties do not cease with handling correspondence. Then there is a technical editor, handling publicity, with an associate editor assisting him and reporting to him. Serving the two editors is another secretary. The production manager has two assistants, a file clerk and a mail-addressing and storeroom clerk. Altogether, a staff of less than a dozen executives and clerks handle every detail of the advertising department—creating, purchasing, accounting, sales promotion, research, and all attendant routine work.

The advertising department is independent of all other departments of the business, with one exception—the strong link that ties it to all other departments—namely, the "Central Control Committee." This committee consists of the president, the heads of the sales, research (other than that within the advertising department), manufacturing, engineering, patent, and other departments. The advertising manager reports directly to the president and executive committee.

### **How production is handled.**

Production covers a multitude of activities. The advertising department prepares many varied forms of advertising messages, each of which, by virtue of the nature of the business, must be more or less technical. This calls for more than ordinary skill and care in the creative and physical make-up.

In the trade and business publication field alone, the company uses the leading publications in each industry. Mailing lists, of which there are several classifications, cover hundreds of thousands of names and addresses. In addition, the company exhibits yearly at over fourteen industrial shows, fairs, and conventions, and at its own sales gatherings. In almost every case the advertising department prepares and routes these exhibits, which in itself is no inconsiderable production job.

### **Purchasing practices.**

An assistant purchases all art, photography, engraving, electrotyping, and so on, and supervises such purchases when made by the advertising agency for publication advertising. All purchase orders for mechanical or other advertising production are drawn by the advertising department under this assistant's direction, with final approval vested in the advertising manager. These operations are entirely independent of the corporation's regular purchasing department.

COPY NO. 2039 PUBLICATION Sales Management				SUBJECT Molded Protector Case								
PUBLICATION	ISSUE	SPACE	COST	RECEIVED			PRODUCTION CHARGES					
				PROOF	REPRINT	DATE	FIRM	ITEM	AMOUNT	D. & R.	ACTY. NO.	
Sales Mgmt.	March	1 P.	\$160	3/1	3/18	2/19	Company A	Comb. & Line Etching	25 07	3/7	2-B	
Prod. Mng.	March	1 P.	\$180	3/4	3/19	2/21	Company B	Retouching	18 00	3/7	2-B	
Factory	April	B.C.	\$550	3/25	4/18	2/16	Company C	Photo & print	16 50	3/7	2-B	
Nation's Bus.	April	1 P.	\$1140	3/25	4/18	2/26	Company D	Rough Sketch	10 00	3/7	2-B	
						2/28	Company E	Typography	20 20	3/28	2-C	
						2/28	Company F	5 Electros	8 24	3/28	2-C	
						3/5	Company G	1 Electro	1 36	3/28	2-C	
						3/5	Company H	1 Electro	3 16	3/28	2-C	
						2/27	Company J	Finished Art Work	48 00	3/28	2-B	
						3/11	Company K	Line Etching	2 36	3/28	2-B	
						3/13	Company L	Green Ben Day Line	46 88	4/9	2-B	
						TOTAL						
CAPTION Today's Bakelite Molded protector and its "Ruggia Iron" ancestor												
COPY NO. 2039 PUBLICATION Sales Management				SUBJECT Molded Protector Case								

Fig. 86.—Production Record Card.

The procedure of ordering, checking, receiving, invoicing, and distributing the advertising material is simple. Ruled cards are used for most operations. Production jobs generally are divided into (a) space production, and (b) direct mail or other material. For example, when a piece of advertising is to be

Date	Firm	Item	Amount	OK	Act	Date	Firm	Item	Amount	OK	Act
RADIO SHOW						PREMIUM SHOW					
3/27	Company A	1/3 Page 2 of Space	-	1/4	1/4	3/27	Company A	1/4 Space cost	-	3/5	1/4
4/7	Company B	Exhibition to N.Y.	-	1/5	1/5	4/7	Company A	Bull's space cost	-	7/5	1/4
4/8	Company C	1/2 Page 2 of Space	-	1/5	1/4	4/8	Company C	1 Photo & Print Book	-	5/2	1/4
4/24	Company D	Renewing layout	-	1/5	1/4	5/1	Company D	Address change	-	7/3	1/4
7/9	Company E	Expense change	-	1/2	1/2	7/9	Company E	Return of sample	-	7/3	1/4
						7/9	Company F	Revised layout design	-	6/5	1/4
						7/9	Company F	Costing & storage	-	6/5	1/4
#14 Exhibitions Radio Show - Premium Show						Miscellaneous 19					

Fig. 87.—Account Card.

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prepared, the secretary to the assistant advertising manager in charge of production fills out a form known as the "Production Record" or "Copy Card" (Figure 86), giving the job or "copy" number and the various details covering the particular piece, including all charges. So far as possible, all costs entering into each job are pre-determined, and charges are checked against these estimated costs. Each job, likewise, is given a number and an account classification.

A similar form, known as the "Account Card" (Figure 87),

Publication 19	SPACE	COST	Copy #	Check.	Bill.	Publication Date	SPACE	COST	Copy #	Check.	Bill.
Jan. 15 1P.		\$160	2037	1/20	12/26						
Feb. 15 "	"	"	2038	2/21	1/25						
Mar. 15 "	"	"	2039	3/23	2/25						
Apr. 20 "	"	"	2040	4/26	3/25						
May 15 "	"	"	2041	5/20	4/25						
June 15 "	"	"	2042	6/20	5/25						
July 15 "	"	"	2043	7/27	6/25						
Aug. 15 "	"	"	2044	8/30	7/25						
Sept. 15 "	"	"	2045	9/18	8/25						
Oct. 20 "	"	"	2046								
Nov. 15 "	"	"	2047								
Dec. 15 "	"	"	2048								
Publication: Sales Management											

Fig. 88.—Publication Record Card.

is kept for all such items as overtime, motion pictures, exhibitions, office supplies, entertainment, and so on.

In handling publication advertising, another card form designated as the "Publication Record Card" (Figure 88), is employed. This is ruled for additional classifications such as name of publication, issue, space, and cost of space, with room for recording approval of proof and receipt of checking copy. On this card is entered the "Copy Number" relating to a definite advertisement or advertisements.

A form called the "Manufacturer's Card" (Figure 89) provides a complete record of photographs, engravings, and actual samples employed in business paper advertising. This card includes such information as (a) manufacturer's name, (b) article, (c) copy



aid. Such work may be summarized under five broad classifications as follows:

- a. Preparation of exhibits and displays—"suggestion cabinet," "sample-kits," etc.
- b. Coöperation with the sales department in shows, conventions, etc.
- c. Preparation of literature of various kinds, including addresses to be used by sales force
- d. Gathering data on old and new products and on industrial applications, both actual and possible
- e. Preparation of market-analysis material which may be used by the sales as well as the advertising department.

### Handling inquiries.

Inquiries come from a variety of sources. A fruitful field is the company's own advertising, and in this the industrial and trade-publication advertising plays a large part. Many mediums are used and each publication is keyed. Each advertisement bears the address of the executive offices, as well as those of the branches. All inquiries are forwarded to the advertising department, where they are recorded and tabulated. Monthly as well as yearly records are made up by the advertising department (Figure 90). After recording the inquiry and crediting it to its source, the advertising department acknowledges it and sends such literature as may be wanted. If sales or engineering service is wanted—such as the possibility of adapting Bakelite materials to an existent or proposed product—the inquiry is promptly referred to the proper department for attention.

### Photographs.

Every effort is made to secure photographs of the application of Bakelite products, and where pictures cannot be secured, to take the photographs themselves. These photographs are valuable stock-in-trade. A large photographic file is maintained and carefully cross indexed.

### Mailing lists.

Naturally it is necessary for the company to keep active and carefully compiled mailing lists. There are many such, covering customers and potential customers, editors, and so on. The majority of lists are kept in the form of stencils, which are cut by the staff. The total number of names and addresses listed runs into the hundreds of thousands.

## Accounting and other records kept by the department.

The advertising department handles its own routine advertising accounting, in contra-distinction to the corporation accounting which is done by the general accounting department, located at New York, and the factory accounting, which is done at Bound Brook, New Jersey.

ANALYSIS OF BOOKLET REQUESTS AND INQUIRIES  
April 19—

NO.	PUBLICATION	ADVERTISING	PUBLICITY
(1)	-----	17	17
(2)	-----	1	1
(5)	-----	5	5
(4)	-----	5	5
(5)	-----	4	7
(6)	-----	5	11
(7)	-----	1	5
(8)	-----	4	1
(9)	-----	5	4
(10)	-----	7	5
(11)	-----		7
(12)	-----		
(13)	-----	7	7
(14)	-----	5	5
(15)	-----		
(16)	-----	5	5
(17)	-----	1	1
(18)	-----	5	5
(19)	-----		
(20)	-----	6	6
(21)	-----	15	15
(22)	-----	10	6
			16

RECAPITULATION OF BOOKLET REQUESTS & INQUIRIES January through December 19—													
NO.	PUBLICATION	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec. Totals
(1)	-----	1	13	8	7	4	5	2	10	1	6	7	15 77
(2)	-----			2	4				3	2	4	2	17
(3)	-----							1	1	1	5	1	2 9
(4)	-----	1	4	2	5	5		6	4		6	5	7 45
(5)	-----	4	6	4	6	8	10	5	5	5	6	5	5 65

Fig. 90.—Inquiry Record Form.

Bakelite's advertising department accounting and record keeping consists of the following:

- \*1. Budget control (including the advertising program)
- \*2. Appropriation breakdown (by products)
- \*3. Purchase records (requisitions, receipts for goods, etc.)



## 334 ADVERTISING AND SALES DEPARTMENTS

- \*4. Production records (job number records—space, printing, exhibitions, motion pictures, etc.)
- \*5. Invoice records (recording bills on voucher register sheets and indicating exact accounting distribution)
- \*6. Inventory records (stock on hand, materials and supplies)
- \*7. Schedules (for space and other advertising, consumer and sales aids)
8. Employment records (personnel)
9. Copy number records
- \*10. Expenditure records (monthly and annual)
- \*11. Agency fee records
12. Copy records (schedule and follow-up; data to central committee)
13. Filing records (market data file, completed advertising material, research, proofs, correspondence, production, invoices, etc.)
14. Magazine records (routing to readers—filing)
15. Inquiry records (classify for monthly and annual report)
16. Mailing-list records (stencils, stencil file, "kill" file, mailing schedules)
17. Convention records (shows, exhibits, fairs, etc.)
18. Film bookings
19. Advertising scrapbook (tear sheets of all publication advertisements)
20. Stamp records
21. Messenger service records

(Note: Items above checked (\*) indicate records actually kept in advertising accounting department.)

All bills for advertising material go to the advertising department, where they are checked and approved and the charge is indicated against the proper product or account for the accounting distribution, after which they are forwarded to the general accounting department in New York.

This system of accounting is extremely flexible, and for this reason has been found advantageous in handling advertising for subsidiary companies. With a slight change in control numbers, identical or parallel systems may be set up for these firms. This permits the advertising department to handle all accounting transactions for the parent company and subsidiaries with a minimum of confusion.

### Filing old advertisements.

Tear sheets of publication advertising, after being checked and indexed, are pasted in standard-sized scrapbooks and carefully stored in a permanent file, when filled. Twenty samples of each piece of printed matter are also retained in a permanent

file and indexed for ready reference. Card-index forms are used for this purpose.

A display of current and near-current advertising is maintained on the walls of a large room in the advertising department. This is of particular interest to visiting customers and prospective customers, and is helpful in "selling" them on the nature and extent of the company's advertising.

### **Media records.**

The advertising department does not attempt to maintain a complete file of rate, circulation, and other data of all publications, as the agency's rate-and-data department is relied upon for this information. It does, however, collect and file current data on those publications it uses, or may use.

Inasmuch as the advertising department engages in market research, it continually receives a large number of trade and other publications. These are read by the technical editor and pertinent material is removed, after which the publications are filed for a reasonable time and then discarded. Magazines are also circulated among the company officers. Upon their return they are clipped and filed.

### **Market and other data.**

Although the advertising department maintains no special library, a careful file is kept of material on markets to which the corporation sells, or may sell, that is, industries having outlets which may be prospects for Bakelite business. These data are filed in regulation steel correspondence files and cross indexed for reference.

### **Handling distribution of materials and supplies.**

Practically all printing and other advertising material is delivered direct to the advertising department at Bound Brook, N. J. Here it goes to the receiving room, where it is checked against requisitions for any possible discrepancies. Certain members of the staff are definitely charged with the duties of handling these details, down to the checking of the postage for outgoing materials.

### **Perpetual inventory.**

The advertising manager is informed monthly of the material on hand—both advertising and departmental supplies.

The company follows the modern tendency of gauging its ad-

vertising requirements very carefully and limiting the size of its printing orders, and the like, to meet actual and carefully analyzed needs. Inventory is thus held to the minimum. Should it become necessary to prepare a re-run of any material, such as a booklet or-leaflet, and there is no provision for it in the budget, the matter is laid before the Central Committee for decision. The advertising department does not exceed its budget without authorization.

Advertising supplies, such as stationery and office equipment, are inventoried in the same manner as are advertising materials.

### **Filing materials and supplies.**

In general, this company follows the usual pattern in storing its material for making up the advertising and the completed advertisement. Regulation steel filing cabinets are used for filing standard photographs, and where these are too large for files they are kept in a special cabinet. A very important factor is the filing and recording of photographs of manufactured products containing Bakelite in one form or another. These are cross-indexed by "manufacture," by "product," and so on. Such data, and files of magazines, scrapbooks, and so on, are kept close to the advertising executive offices. Completed material, booklets, and so on, in bulk with departmental supplies, are retained adjacent to the receiving and shipping rooms.

## CHAPTER XIV

### *Office Management in the Purchasing Department*

Like office management activities, purchasing has not always been centralized. Prior to the World War, purchasing was considered by many businessmen to be a function that could be carried on by a department head in his spare time. In comparatively few of the larger and more progressive concerns, to be sure, there was some centralized buying, especially of basic raw materials. For the most part, however, the purchase of sundry supplies and materials was a part of the work of each department head. The war brought a very noticeable change in these conditions. Many centralized purchasing departments were established. Little consideration was given, however, to prices paid, sources of supply, records, or systems. Purchasing was in most cases largely a matter of buying the best that could be obtained under the circumstances, at whatever price one had to pay and from whoever was able to make the quickest delivery.

This condition prevailed until the summer of 1920. Then a definite change took place, due primarily to depressed business conditions. Many companies found themselves with large stocks on hand of both raw materials and finished products, which in many cases could not be disposed of at cost, much less at a profit. The practical importance of accurate, complete, and detailed records and of proper systems of control became quickly apparent. Purchasing agents were rather rudely awakened to the fact

that skilful purchasing did not consist wholly of signing their names to purchase orders, or of acting as transfer agents of facts from purchase requisitions to purchase orders. They began to realize that rule-of-thumb methods of buying, as well as failure to utilize the best methods for recording the many kinds of information which they must have constantly available, were bad business policy because they were likely to be costly. Centralized purchasing, which in many cases had been something of an experiment or had been looked upon as a temporary expedient, was more and more adopted as a permanent policy. Records and office methods that gave the vital facts in concise form were adopted. Today by far the greater portion of firms operate their purchasing departments on this more efficient and economical basis.

**The office manager's interest in purchasing.** The work of the purchasing department is an activity in which the office manager usually has a particular personal interest. In the first place, the office manager in a small concern sometimes also acts as purchasing agent.<sup>1</sup> This is especially true in the case of the branch-office manager, who often combines the responsibilities of office manager, personnel executive, purchasing agent, accountant, and credit and collection manager. Secondly, the office manager necessarily has constant relations with the purchasing department in connection with the purchase of office equipment and supplies, and often in connection with the supervision and operation of the stationery stock room. And finally, as the executive who has a functional interest in the methods, systems, and procedures of all departments, the progressive office manager should make it part of his business to audit purchasing department methods periodically, just as he does those of all other departments.

**Scope of the purchasing function.** As in the case of every other operating department, the function of the purchasing department and the scope of the authority and responsibility of the purchasing agent, or director of pur-

chases as he is frequently called, varies in practice rather widely. In some cases his work consists almost exclusively of purchasing, and the purchasing department is in effect a specialized service section of the production department. In other organizations, on the contrary, the director of purchases is a departmental executive who reports directly to

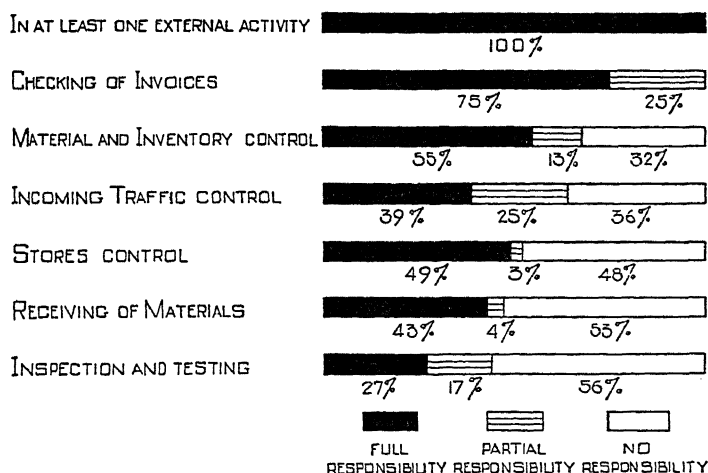


Fig. 91.—Responsibilities of the Purchasing Agent.

the president or general manager and who is responsible for traffic, inventory control, stores, testing, inspection, and receiving, as well as for purchasing.

A recent study of the scope of the purchasing function indicates that<sup>1</sup>:

The checking of invoices against purchase orders appears to have been generally accepted as a normal responsibility of the purchasing department, while the checking of incoming materials against purchase orders appears to have become, to a much lesser degree, a purchasing responsibility. The more usual responsi-

<sup>1</sup> Schell, Erwin H., *The Scope of the Purchasing Function*. National Association of Purchasing Agents, Inc., New York, 1935.

bilities of the purchasing department, as revealed in this study, are summarized graphically in Figure 91.

Attention was also given in this survey to the division of responsibility for purchasing and allied functions within the organization. In general there appears to be no single executive in the larger companies who directly coördinates purchasing, receiving, inspection, testing, stores, inventory control, and traffic. Instead, the functions of receiving, inspection, testing, and stores, when not under the control of the purchasing agent, are characteristically coördinated under the executive who has charge of production. This executive is of equal but not superior rank to the purchasing agent and traffic manager. Coördination of purchasing, traffic, and production, together with other functions such as finance and marketing, is effected by a higher official who may have the title of president, vice-president, or general manager.

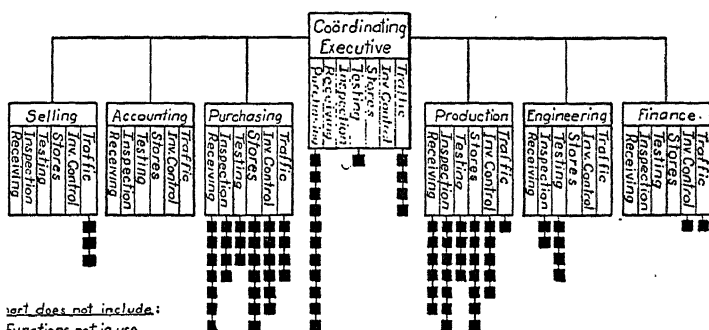
These organization relationships are shown graphically in Figure 92. In these diagrams the term "Coördinating Executive" is applied to those major executives (such as presidents, vice-presidents, and general managers) whose responsibilities are primarily coördinative in nature. Beneath this title, and beneath the subordinate titles, are listed the several activities allied with purchasing whose position in the organization had been ascertained by questionnaire. The attending black units mark the number of such departments in the various responding companies, which report to each division. For example, in the chart of medium-sized establishments, the three units below the division of selling indicate that three traffic departments among the fourteen medium-sized companies reported to sales divisions.

These diagrams appear to establish four tendencies. The first is the high ranking of the purchasing department. In only one instance in each group does the purchasing department report to someone other than the coördinating executive. In the second place, as the establishments increase in size, allied responsibilities of purchasing tend to be shouldered by the production division. This tendency applies to the functions of receiving, inspection, testing, and stores. Third, in the larger establishments, the traffic function increases in importance, tending to report to the coördinating executive rather than to the purchasing or other departments. Fourth, while the evidence is not great, there is indication that inventory control tends, in the larger companies, to seek committee control rather than departmental supervision.

Attention will be given in the sections that follow to all functions and activities of the purchasing department mentioned above. However, since the office manager is primarily interested in procedures, methods, and records, the work of the department is discussed, not by departmental divisions, but in the order in which the records are usually handled by the department. In this way it will be possible

### DEPARTMENTAL AFFILIATIONS

(14 establishments.)  
500 to 2500 employees.



(15 Large Establishments.)  
2500 employees.

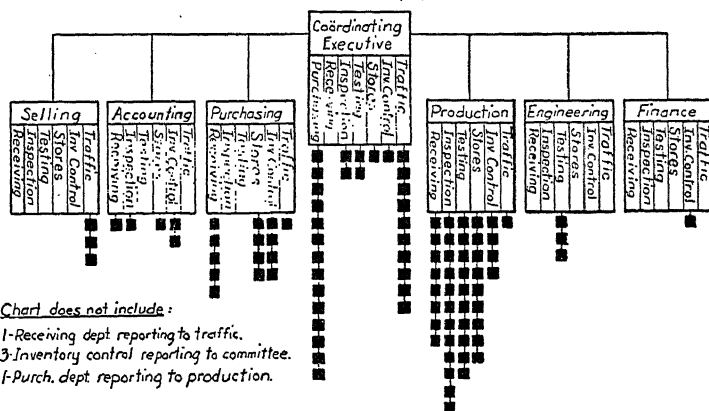


Fig. 92.—Organization Relationships of the Purchasing Agent.



to secure a clear picture of the office methods and plan of work in the average purchasing department.

**The requisition.** Most of the work of the purchasing department starts with a purchase requisition originating outside the department, and received in duplicate.

Purchase requisitions should be honored only when approved by designated authority. In most instances the stock and stores management will be this authority, but since many purchases require different approval, a chart of essential signatures should be set up. For quick identification and ready reference, code letters and definite number series should be assigned to each department authorized to issue purchase requisitions. Such a plan assists in establishing responsibility for each requisition, makes it easy to get or give information regarding it, and facilitates statistical work involving requisitions. Figure 93 illustrates a usual form of requisition.

**The stock record.** The first step taken by the purchasing department upon the receipt of a requisition is to determine whether a sufficient quantity of the item requested is available in the stock room. In many companies all requisitions are first sent to the storekeeper, who indicates thereon whether the item can be supplied from stock. In such cases, requisitions that can be filled at once from stock may never reach the purchasing department. The purchasing agent, however, receives many requisitions directly from operating departments for items regularly bought. All of these should be checked first with the stock records.

The primary purpose of the stock record is to give a complete statement of receipts, issuances, and balances on hand of every item carried in stock. This information is obviously essential if promised delivery dates to customers are to be kept, if periodic financial statements are to be prepared at times other than when a physical inventory is taken, and if quantities to order are to be based on facts and not on guesswork. A separate card or sheet is kept for each individual item carried in stock.

[illegible]

Fig. 93.—Requisition.



reserve against emergencies is always available, and a definite point for re-ordering is established as a guide for use by the storekeeper and the purchasing agent.

The body of the stock-record form should provide for main columns entitled Ordered, Received, Issued, and Balance Available. Under each of the first three main headings are sub-columns showing the purchase order number (or sales or production order number in the case of the Issued column), date on which the order was placed or received, and the number of units involved. The Balance column shows the number of units on hand and the date on which the balance was struck. In some cases additional sub-columns are provided under the headings Issued and Received for showing the unit price and the extended total price. Likewise, some stock-record forms contain sub-columns for running totals under both the Received and the Issued headings, thus eliminating the Balance column entirely. The claim is made, not without considerable foundation, that one does not need to know the balance on hand at all times, and that, moreover, this balance can easily be secured at any time by merely subtracting the last entry in the Running Total sub-column under the Issued column from the corresponding figure in the Received column. The fact, however, that the majority of stock records have a separate Balance column seems to indicate that the "running-total" plan has not gained very wide acceptance.

The Required and Appropriated columns are for use in cases where it is necessary to reserve or set aside certain quantities for sales or production needs before incoming goods that have been ordered have actually been received. In the Required column the details of the total number of units required are recorded. In the Appropriated column the number of available units appropriated for a given sales or production order number is noted. When the incoming shipment actually arrives, the remaining number necessary to complete the requirements is first entered in the Appro-

appropriated column. When the issuance has been made, the transaction is recorded in the regular way in the Issued column. For example, if sales order No. 10,892 requires 150 units, but only 100 units are now available, 150 is entered in the Required column and 100 in the Appropriated column. When the new lot arrives, the 50 needed to complete the total requirement is first entered in the Appropriated and then the total (150) entered in the regular way in the Issued column. Under certain circumstances, as, for example, in the case of highly fluctuating demands in a seasonal business, the use of Required and Appropriated columns is of great practical value. In other cases there is little or no need of making provision for them.

The stock record is one of the mainstays of any adequate and comprehensive plan of record control for the purchasing and stores department. The increased attention being paid by businessmen to the matter of economy, as well as to business and market conditions in their relation to efficient purchasing, is an important practical reason why virtually all well-managed companies maintain some kind of stock-control records.

**Specifications.** If the item requisitioned is not available in stock, a purchase order must be placed. Sometimes specifications accompany the requisition. The specifications are simply a detailed, specific, and, frequently, technical statement of the quality of goods wanted. Dimensions, chemical content, construction, and many other units capable of exact determination and measurement make up the specifications. When the goods are ordered, the vendor is sent a copy of the specifications with instructions to adhere to them within certain definite limits. When the material

*Note.* Much of the material contained in the remainder of this chapter is taken directly from or based on (a) Pamphlets 1, 7, 16, 17, 18, 20, and 22 published by the National Association of Purchasing Agents, Inc.; (b) Banks, Thos. H., Purchasing Agent, Price Brothers and Co., Ltd., *Practical Purchasing Procedure*, Thompson Publications, Ltd., Toronto, 1930; (c) *The Purchasing Department*, an outline of an active exhibit made by Remington Rand Business Service, Inc., at the Chicago Convention of the National Association of Purchasing Agents, June, 1930.

## STANDARD PAPER SPECIFICATIONS

KIND:	SYMBOL:
BRAND:	WEIGHT BASIS:
WATERMARKED:	COLORS:

FIBRE COMPOSITION:	TO AVERAGE NOT LESS THAN:	IDEAL AVERAGE
Rag	%	%
Bleached Sulphite	%	%
Unbleached Sulphite	%	%
Sulphate	%	%
Soda Pulp	%	%
Jute	%	%
Ground Wood	%	%
BURSTING STRENGTH (MULLEN)	Lbs.	Lbs.
TENSILE STRENGTH (PERKINS)		
Machine Direction		
Cross Direction		
FOLDING ENDURANCE (SCHOPPER)		
Machine Direction	Dbl. Folds	Dbl. Folds
Cross Direction	" "	" "
TEARING STRENGTH (ELMENDORF)		
Machine Direction	Gms.	Gms.
Cross Direction	"	"
CALIPER: Average	Min:	Max:
WEIGHT } BASIS } Standard	Min:	Max:
REMARKS:		

Date ..... All tests at 65% Relative Humidity

Fig. 95.—Standard Paper Specifications.

is received, the specifications are used as a basis for checking quality or content. Figure 95 illustrates the specific, detailed kind of data usually found on a specification.

**Information regarding sources of supply.** One of the most important office management problems of the purchasing department is to keep the records and other sources of information so that the department knows at all times not only with whom purchase orders have been placed in the past but also who else is a possible supplier. For example, assume that additional office space is being taken and that the purchasing agent receives from the office manager requisitions for carpets, linoleum, electrical fixtures, and office furniture. Such items are not purchased frequently, so it is unlikely that the purchasing agent will know offhand the names of several vendors of carpets, linoleum, and so on, and that he will know exactly what they offer, and the probable price ranges. Yet without doubt sales representatives of several such concerns have called on him within the past year or less. All of them have left business cards and doubtless some, at least, have subsequently sent catalogues and other sales literature.

Obviously the purchasing agent must have all such information regarding possible sources of supply quickly available. Some companies have very complete systems of numerical and alphabetical indexes in which all items purchased are classified by products, such as automobiles, trucks, and tractors; coal; oils and greases; rope and cordage; wire goods, and so on. In such cases each product is assigned a number. A subsidiary alphabetical classification is then made of each supplier of each product. In one purchasing office which follows this plan there are thirty-eight sections of the numerical index, while the alphabetical index contains over 5000 items. Some companies go to the other extreme and have little or no written information systematically organized, depending largely on the local classified telephone directory when possible suppliers must be found quickly for an item infrequently purchased. The

discussion in the following sections assumes that a reasonable middle course will be followed.

**Contracts.** When an item is purchased regularly, a purchase contract is often made with one or more vendors. Contracts are of many kinds, ranging from a definite agreement to purchase a certain quantity at a certain price within a certain time, to an agreement to protect the price against market changes for a definite period. In any case contracts require a written agreement, usually in duplicate, signed by both buyer and vendor, each retaining one copy. The contract form is usually letter or legal size, and is often folded and filed vertically in individual pockets in document files by the name of the vendor. The contract itself is frequently a printed form containing those features that are common to all contracts and providing ample space for typing in the special features of individual contracts. On the other hand, some buyers sometimes feel that there is so much variation in these contracts that it is just as easy to type contracts complete. If this is done, care must be taken to maintain accurately worded general agreement clauses, prepared by the legal department. Certain other agreement clauses for specific commodities need to be just as carefully worded. Especially where the entire contract is typewritten, it is well to preserve a paragraph book with master copies for all such paragraphs. In this case the buyer dictates each contract, using the paragraph book as his guide. Figure 96 shows a typical dictated contract in blank form.

**The contract record.** In addition to the contract file, a contract record must be maintained. The contract itself usually covers a commodity class, such as lumber, steel, and so on. Since it may call for the purchase of a certain quantity, regardless of dimensions and other specifications, within a given time, a record of purchases against each contract must also be kept. The purchase record card, which is discussed in a subsequent section, gives the story only with regard to a particular item, so that each contract pur-



## PURCHASE CONTRACT

Date.

(Name of Company and Address) .....  
Hereinafter known as the sellers, agree to sell, and Remington Rand Inc., hereinafter known as the buyers, agree to purchase for shipment to Remington Rand Inc., Tonawanda, New York, or any of its branches as designated on specific orders against this contract, the buyers' approximate requirements (Material) in quantity and sizes listed below:

(  
(  
(

(Detail of specifications, quantities, prices, terms, etc.)

The buyers reserve the right to reject at seller's expense any (Name of Material) received on this agreement that is not in accordance with the buyer's specifications and/or is in any way defective.

Shipments are to be made only on formal purchase order which the buyer will send the seller from time to time to apply on this contract. Shipping dates will be specified on each purchase order.

Payment, by the buyer, of any bill under this agreement, before actual inspection or acceptance of goods, shall not waive any of the buyer's rights under this contract.

REMINGTON RAND INC.

By.

Director of Purchases

ACCEPTED BY:

[illegible]



in smaller quantities at various times for individual plants.

A file of make-and-hold agreements (Figure 98) similar to the contract file may be used for the agreements themselves. A make-and-hold record may be used also in a file similar to the contract record. Make-and-hold or mill-stock records differ from purchase records in that they must show unapplied balances still at the mill; also they usually require the analysis of purchases by plant or destination.

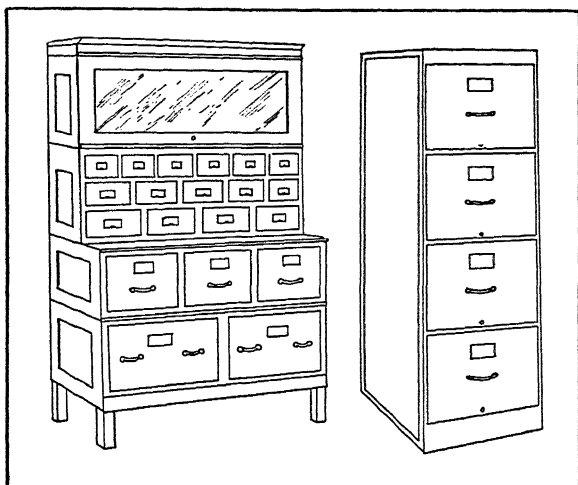


Fig. 99.—Catalogue-Filing Equipment.

This is easily accomplished on the record card or by work sheets similar to those used on the contract record.

**Catalogues.** The catalogue files generally contain valuable information on out-of-the-ordinary commodities. In fact, a fair percentage of catalogues and pamphlets are filed, not because the commodity is frequently purchased, but because the purchasing agent feels that some day he may be called upon to purchase the commodity described in the catalogue or pamphlet.

Some progress has been made within the last few years with respect to the standardization of catalogues, owing to the activities of the National Association of Purchasing

[illegible]

Fig. 100.—Purchase Record and Sectional Index of Catalogues.

Agents, and possibly some day standard-sized catalogues will be a reality, but until such a time comes, arrangements necessarily must be made to file catalogues of all sizes from small pamphlets to the largest size of catalogue published. Figure 99 illustrates a combination of cabinets suitable for this purpose. There are always a number of what might be called standard catalogues which are used very frequently. For ready reference these should be filed in a visible bookcase section and numbered. The smallest-sized catalogues may be filed in the first blind section, and numbered numerically but with the prefix "A," and so on to the largest-sized catalogues, which are filed in the bottom section of the cabinets under the prefix "E." For filing pamphlets and very thin catalogues the standard four-drawer filing cabinet is used, the pamphlets and catalogues being inserted in folders and numbered as before, with the prefix "F."

All catalogues should be indexed alphabetically under firm names, and if there is a quantity of them, a sectional index also should be maintained. It is desirable that one member of the staff of the purchasing department be held responsible for the care and filing of all catalogues. It is also advisable, for identification purposes, to have all catalogues marked "*Property of Purchasing Department*," especially where other departments have catalogue files. When catalogues are loaned to other departments, this should be signaled on the alphabetical index, so that if a catalogue is not in the files when required it can be located without difficulty. A red signal might be used to intimate that the catalogue has been loaned to the accounting department; a green signal for the engineering department; a blue signal

---

RETURN TO  
PURCHASING DEPARTMENT  
QUEBEC, P.Q.

This catalogue and/or file is the property of the Purchasing Dept. and is referred to daily, therefore, it is important that you return it the same day it is loaned you and under no circumstances shall it be held indefinitely.

File No. ....

PRICE BROTHERS & CO., LIMITED

Fig. 101.—Label Attached to Catalogues and Pamphlets.

for the sales department, and so on. Some companies attach a label, similar to that shown in Figure 101, to all catalogues and pamphlets that may be loaned to other departments.

**Salesmen's business cards.** Salesmen's business cards are another source of supply record. All such cards should be filed in a convenient drawer in the desk of the purchasing agent, or in a small filing cabinet near at hand. The cards should be arranged sectionally, after the date of the call has been noted on each. Purchasing agents often have to rack their brains to remember the name of the representative of some firm, but with a file such as this at the purchasing agent's hand, provided he knows the nature of the business of the firm, the name of the representative soon becomes a known factor. This file is also the logical place to keep special information concerning firms or their products as developed in dealings with them, together with any detailed instructions as to buying a particular commodity. For example, if a report is received that valves furnished by a certain firm for some particular purpose have proved very satisfactory in service, a record for future reference in buying should be filed under the proper section. On the other hand, if an unfavorable report is received regarding some commodity, a record should be filed so as to prevent that commodity from being purchased from the same firm again.

**The inquiry.** As a general rule there are two classes of inquiries, one in connection with goods for which requisitions have been received, and the other covering miscellaneous requests for quotations to be used for estimating purposes, which may or may not result in actual requisitions and orders. Under this latter heading may be included requests for quotations with a view to placing contracts.

The general opinion is that printed inquiry forms sent out in duplicate or triplicate are preferable to letter inquiries, as the printed form is designed so that when it is properly filled in, all the information necessary to place the





business is available. It is important, when deciding where the order shall be placed, to consider the quality of the goods in question and all charges that may affect the laid-down cost, such as transportation, duty, sales tax, trade and cash discounts, as even the item of cash discount alone often is a deciding factor in placing the business.

When such inquiries have been sent out the requisitions should be filed in a pending file. As this file is never very large, it is comparatively easy to follow up the non-receipt of quotations.

Inquiries sent out as the result of the receipt of miscellaneous requests for quotations call for more or less permanent records, because such inquiries may remain in the pending file for weeks or possibly months before a definite decision is made. A visible record of such outstanding inquiries is illustrated in Figure 102. The correspondence is filed numerically according to the inquiry number shown in the bottom right-hand corner of the record card. The follow-up is easily controlled by signals, and if the follow-up date does not fall in the current month, a signal is placed over both the date and the month spaces, as shown in the illustration. The completed inquiry records are filed sectionally. This arrangement provides an additional source-of-supply record, as it gives the names of the firms with whom business is regularly done with regard to all classes of materials. If an order is placed, the quotations, and so on, are filed under the order number, and if the subject is closed without an order being placed, the quotations are filed sectionally in the general correspondence files.

**Quotations.** Quotations are obviously important and valuable not only in connection with the specific order that necessitated the inquiry, but also with regard to future action in purchasing similar commodities. There is, however, some difference of opinion as to the most efficient method of filing quotations. Some purchasing agents prefer a separate quotation file arranged alphabetically, based on the names of the materials on which quotations have

been received. Others prefer a similar file, except that the successful quotation is filed numerically under the order number, together with all other papers in connection with the order. Still other firms file all quotations together with all correspondence relating to a specific order numerically under the order number. Obviously this is a matter to be determined by the circumstances of each case.

PRICE BROTHERS & CO. LIMITED.					QUOTATION RECORD		
DATE	ORDER NO.	MATERIAL	PRICE		PER	DISCOUNT	P.O.B.
1-8	K.37120	Pig Iron	28	00	Ton	Net	Montreal
16-9	K.39610	" Aluminum	22	1b.	"	"	Toronto
20-10	K.42311	" Lead	5	50	100	"	Montreal
Pig Metals							20-0-0
Babbitt, Solder, etc.							20-0-1
Sheets & Plates, (Sundry)							20-1-0
Brass & Copper Sheets & Plates.							20-1-1
Iron & Steel Sheets & Plates, (Black)							20-1-2
Iron & Steel Sheets & Plates (Galv.)							20-1-3
Iron & Steel Corrugated Sheets.							20-1-4

Fig. 103.—Quotation Record.

**Summary of quotations.** As bids are received from various vendors, they are attached to the purchase office copy in the follow-up file, after entry on the summary sheet. If the vendor submits his bid in letter form or on his own quotation form, the proper inquiry can be readily located by means of the cross index, and the bid recorded and attached, exactly as if the proper form had been used. When the closing date arrives, the follow-up file automatically brings the individual bids and the summary to the attention of the file clerk. The purchase record card is attached—the requisition is already there—and all papers are delivered to the buyer. Comparisons of prices and other factors are quickly made by means of the summary forms. All bids on that inquiry are attached, giving ready reference to any

Fig. 87.—Account Card.

details. On the basis of all these facts the purchasing agent decides with whom to place the order.

**The purchase order.** We now come to the purchase order itself. In making out purchase orders the typist consults her name list for the vendor's exact name, address, and terms; she consults her purchase-record card for exact wording of specifications; but for quantity, price, delivery,

<b>D O E  S A W S</b>	<h1 style="margin: 0;">DOE MANUFACTURING COMPANY</h1> <p style="margin: 0;">10 IVANHOE ROAD CLEVELAND, OHIO</p>		<b>PURCHASE ORDER No.</b>  <b>REQUISITION No.</b>  <b>IMPORTANT</b> Both above numbers must appear on all correspondence, invoices, shipping papers and packages.
	To..... ..... .....		<b>DATE</b>  <b>Account No.</b>  <b>Class No.</b>
	<b>SHIP TO</b>  <b>F.O.B.</b>	<b>VIA</b>  <b>DELIVERY WANTED</b>  <b>TERMS</b>	

---

**INSTRUCTIONS**

Invoice to Duplicate and mail with Bill of Lading or Express Receipt to 10 Ivanhoe Rd., Cleveland, Ohio, the day EACH shipment is made.

**Terms as previously arranged or specified on this order.**

**CONDITIONS**

- Acceptance**—A knowledge of this order must be made in writing by return mail. Acceptance of this order constitutes acceptance of all conditions herein stated.
- Prices**—This order must not be filled at higher prices than last quoted without authority of the buyer.
- Packing and Carriage Charges**—No charge allowed for packing or cartage unless specified on this order.
- Quality and Inspection**—All material furnished must be as specified and will be subject to inspection and approval of buyer after delivery. The right is reserved to reject and return at the risk and expense of the

**SPECIAL NOTICE TO SELLER**

Supplier each portion of any shipment which may be defective or fail to comply with specifications without purchasing the remainder of the order. It is intended it will be held for disposition at expense and risk of the seller.

- Quantity**—The specific quantity ordered must not be changed without buyer's permission in writing.
- Non-Performance**—Buyer reserves the right to cancel this order or any portion at any time if delivery is not made within and as specified, time being of the essence of this order and charge seller for any loss sustained.
- Patents**—Buyer warrants that no part of the material ordered is or will be infringing on any patent, trade mark or copyright of any person or organization. If it is found that the material ordered is or will be infringing on any patent, trade mark or copyright of any person or organization, the seller shall be liable for all damages sustained by the buyer.

---

Please mail our order for the following material subject to all the instructions and conditions contained on the same order.

**DOE MANUFACTURING CO.**

By.....  
Director of Purchases.

Fig. 104.—National Standard Purchase Order Form.

and so on, she follows the requisition or bid, as the case may be.

The National Standard Purchase Order form approved by the National Association of Purchasing Agents is shown in Figures 104 and 105. This is 11 by 8½ inches in size, and therefore accommodates itself readily to any plan of filing.

<b>D O E  S A W S</b>	<b>DOE MANUFACTURING COMPANY</b> 10 IVANHOE ROAD CLEVELAND, OHIO	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">PURCHASE ORDER No.</td> </tr> <tr> <td style="padding: 2px;">REQUISITION No.</td> </tr> <tr> <td style="padding: 2px;"> <b>IMPORTANT</b>            Both above numbers must appear on all correspondence, invoices, shipping papers and packages.         </td> </tr> </table>	PURCHASE ORDER No.	REQUISITION No.	<b>IMPORTANT</b> Both above numbers must appear on all correspondence, invoices, shipping papers and packages.
PURCHASE ORDER No.					
REQUISITION No.					
<b>IMPORTANT</b> Both above numbers must appear on all correspondence, invoices, shipping papers and packages.					
To: _____ _____ _____		DATE _____ Account No. _____ Class No. _____			
SHIP TO _____ F.O.B. _____		VIA _____ DELIVERY WANTED _____ TERMS _____			
<small>Please enter our order for the following material subject to all the instructions and conditions contained on the face hereof.</small>					
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>INSTRUCTIONS</b></p> <p>Invoice in Duplicate and mail with Bill of Lading or Express Receipt to 10 Ivanhoe St., Cleveland, Ohio, the day EACH shipment is made.</p> <p><b>TERMS</b> as previously arranged or specified on this order.</p> <p><b>CONDITIONS</b></p> <p>1. <b>Acceptance</b>—Acceptance of this order constitutes acceptance of all conditions herein stated.</p> <p>2. <b>Prices</b>—This order must not be filled at higher prices than last quoted without authority of the buyer.</p> <p>3. <b>Packing and Carriage Charges</b>—No charge allowed for packing or cartage unless designated on this order.</p> <p>4. <b>Quantity and Inspection</b>—All material furnished must be as specified and will be subject to inspection and approval of buyer after delivery. The right is reserved to reject and return at the risk and expense of the supplier such portion of any shipment which may be defective or fail to conform with specifications without invalidating the remainder of the order. If rejected it will be held for disposition at expense and risk of the seller.</p> <p>5. <b>Quantity</b>—The specific quantity ordered must not be changed without buyer's permission in writing.</p> <p>6. <b>Non-Performance</b>—Buyer reserves the right to cancel this order or any portion of same if delivery is not made when and as specified, time being of the essence of this order and charge seller for any loss entailed.</p> </div> <div style="width: 45%;"> <p>7. <b>Warranty</b>—The seller hereby guarantees the buyer against all losses of profits, damages, or both, resulting from any patent infringement by means of purchasing goods covered by this contract. This guarantee also includes the reimbursement to the buyer of all litigation costs which he may suffer as a result of any patent suit, in addition to the recoveries which may be secured against him or profits and/or damages.</p> </div> </div> <div style="text-align: right; margin-top: 20px;"> <p><b>DOE MANUFACTURING CO.</b></p> <p>By _____</p> <p style="text-align: center; margin-left: 100px;">Director of Purchases.</p> </div>					

Fig. 105.—National Standard Purchase Order Form, with Suggested Rearrangement of Zone 5.

Since it is a zoned form, it permits almost limitless variations to meet individual needs, yet produces a uniformity of arrangement which greatly facilitates the work of the vendor, and tends to reduce errors and misunderstanding. Purchase order number and date always occupy a certain general position. Required delivery date, routing, and other shipping instructions occupy another general position. Fewer errors and misunderstandings will result when all purchase order forms follow a certain general arrangement. A general adoption of the recommendations of the association will accomplish this without interfering with the liberty as to details, which is necessary to make any firm's forms serve the need of its peculiar business.

Figure 104 shows a sample form arranged to conform to the National Standard Purchase Order form. Figure 105 shows a sample form compiled in accordance with a suggested rearrangement of Zone 5. In both exhibits "conditions" are used which are probably of the most universal application. It should be understood, however, that it is the responsibility of each company to include the instructions and conditions that it believes to be necessary to its own routine for handling purchase orders and invoices, and for its own desires for legal protection. The major change in the position of the zones is to shift Zone 5—"for general conditions of the purchase"—to the bottom of the form. There is no exact measurement for the size of the zones on the National Standard Purchase Order form, and therefore the size of the zones may be readily adjusted to meet individual needs without sacrificing the benefits of standardization.

As many copies will be used as are required by the business; but in most lines the same number of copies will be used in every instance. It is seldom desirable to use different sets of purchase order forms for purchasing different kinds of materials. The results of a recent survey concerning the number of copies included in the purchase order set, are shown in the following tabulation:

Copies in the set:	2	3	4	5	6	7	8	9	10	11
Number of sets of forms falling under these classes:	2	20	43	47	49	33	27	10	4	2

A typical distribution of copies of the purchase order is as follows:

Original or vendor's order copy  
 Vendor's duplicate or acknowledgment copy  
 Purchasing office numeric file copy  
 Purchasing office alphabetic file copy  
 Merchandise or stock control copy  
 Branch buyer's copy  
 Stores or warehouse copy  
 Receiving department copy  
 Accounting department copy

It is usually desirable to send all branch copies (buyer's, warehouse, receiving, and so on) to the branch office rather than to the exact department at the branch.

**Purchase order change notification.** In practice it is inevitable that changes must be made in connection with certain purchase orders previously issued. In some instances, the supplier is unable to supply the full quantity, substitutions sometimes have to be made, alterations in shipping instructions may be necessary, or orders may be completely canceled for various reasons. It is necessary

## PURCHASE ORDER CHANGE NOTIFICATION

PRICE BROTHERS & COMPANY, LIMITED.  
 QUEBEC, P. O., CANADA.

THIS NOTICE APPLIES TO PURCHASE ORDER  
 No. K. 26372

TO Messrs J. A. Cook, Ltd.,  
 173 King Street, Montreal.

Please note we have made the following changes in connection with above order.

Item "C" to read 325 lbs. instead of 300 lbs.

Date Oct. 28th, 19\_\_

Reference your letter Oct. 26th, 19\_\_

## IMPORTANT

No change in or cancellation of Purchase Order will be recognized unless authorized by this change notification. Forward only by the Purchasing Department.

PRICE BROTHERS & CO., LIMITED.

Fig. 106.—Purchase Order Change Notification.



visible purchase-record form is illustrated in Figure 107. Any number of different colored signals may be used in connection with this record to signify special information necessary in the placing of orders. For example, if certain material is purchased only on contract, a particular colored signal may be inserted, or if special shipping instructions are necessary, a different colored signal may be used to bring this fact to the attention of the buyer. It will be noted that information regarding commodity and index number is shown at both the bottom and the top of the form. The number is necessary at the top in connection with the current and transfer visible record, and it is necessary at the bottom when the forms are transferred to vertical files.

**Follow-up procedure.** Follow-up is one of the most important functions of the purchasing department, even though the department is only responsible for the tracing of acknowledgments and invoices. If the department also assumes responsibility for the actual delivery of the material, as is often the case, then the follow-up function is all the more important. The procedure outlined below, which is used by one well-known concern, permits the purchasing agent to determine at any time whether or not this work is being carried out efficiently.

The working copy of the purchase order, which is the copy used for follow-up purposes, may be filed numerically in a visible-record cabinet. A colored signal is inserted over the date on which the order is to be traced. For obvious reasons, signals of different colors are used for the different days of the week, the letters S, P, G, O, B, T, and Y signifying the colors of the various signals used—smoke, pink, green, orange, blue, tan, and yellow. This procedure enables the tracing clerk to visualize at a glance all orders that are to be traced on any given date. The first tracing is never later than one week from the date of order, except in the case of orders mailed to, say, Great Britain, when an acknowledgment could not be expected before three to four weeks have passed.



On receipt of acknowledgment and acceptance of order from the supplier, giving particulars as to delivery, and so on, the first step is to remove the duplicate acknowledgment from the acknowledgment file, complete the particulars of delivery, and so forth, as given by the supplier, and send this duplicate acknowledgment to the department or branch to which the goods are to be consigned. This procedure

PRICE BROTHERS & CO., LIMITED  
PURCHASING DEPARTMENT  
QUEBEC, CANADA

Date.

IMPORTANT REQUEST FOR INFORMATION

The object of this printed form is to conserve your time as well as ours. We expect you to answer the questions indicated by a X in the same prompt manner you would reply to a personal letter.

The information required concerns:

Your order.....Our order.....Dated.....

Your pencilled reply on this form will answer our purpose.

	1. Acknowledgement of order not received. Please forward at once, advising shipping date.	
	2. Acknowledgement attached received without shipping particulars. Please return promptly with advice.	
	3. Material urgently needed. Please advise when and how shipped.	
	4. Can you advance shipping date promised.	
	5. If shipped, advise shipping particulars, and please mail invoice in quadruplicate.	
	6. Balance consisting of Items..... urgently needed. Please advise when you will ship.	
	7.	
	8.	

Remarks..

PRICE BROTHERS & CO., LIMITED

.....  
Purchasing Department.

Fig. 108.—Follow-Up Form.

enables the stores department to answer inquiries as to the probable date of the receipt of the goods. The back of the working copy of the purchase order is designed to record invoice and tracing particulars. As this copy is a tumble form, it is not necessary to remove the order from the tray to record this information.

When the acknowledgment is received, a colored signal is inserted on the day of the month on which the order is to be traced for delivery. If it happens that the tracing date is so far ahead that a note of the month is also required, a colored signal different from those already mentioned is used for this purpose. After the information concerning acknowledgment date and promised shipment has been recorded, the original acknowledgment is filed alphabetically to take the place of the duplicate acknowledgment which has been removed from the file. An illustration of a follow-up form is shown in Figure 108. If some such form does not bring the desired information, either specially dictated letters are sent or use is made of the telephone or telegraph.

**Receiving report.** The kinds of records used by the receiving department depend largely upon the policy adopted with regard to giving the receiving clerks information about quantities and prices. The receiving clerk may be given a copy of the purchase order and may check the quantity of incoming material directly from this. In this case, of course, the receiving clerk knows both quantities and prices. A second method is for the purchasing department to request that the vendor supply a duplicate copy of the invoice, which is then used by the receiving department for checking purposes. When this practice is followed, the vendor is sometimes asked to omit unit prices and extensions from the duplicate invoice. Another method is for the receiving clerk to use the packing slip, which is usually enclosed with the goods, as a basis for checking. Again, the purchasing department may require that a receiving report be filled out by the receiving department and sent to the purchasing office. When this is done the receiving-

report form must provide spaces for showing such information as purchase order number, the name of the vendor from whom the goods were received, the number of containers or packages received, the number of units in each package, a description of the nature of the items received, and so on. In large concerns a separate report form is usually filled out for each order number received. In small firms, however, this information may be listed on a single sheet in columnar form and a report of each day's receipts sent to the purchasing department.

**Reports on tests of incoming goods.** In many lines it is necessary to test the product received on various purchase orders. The exact routine naturally varies according to the nature of the product. Some products require continuous testing of samples drawn at intervals from each run or shipment of stock. In this case a standard routine must be set up to insure that the purchase order number is indicated on each test report. Usually it is not necessary to advise the purchasing department in regard to these continuous tests, except where a test shows that the product is unsatisfactory.

**Stock-record entry.** For the purposes of accurate stock-record accounting, it is essential that all incoming material be first sent to the stock room before being delivered to an operating department. If this procedure is not followed, a complete record of receipts and issuances will not be available. While this method may result in some slight delay in the receipt of the material by the operating department, practical experience shows that such delays need be only slight, and that the advantages to be derived from having accurate records far outweigh any inconvenience that may be caused. After incoming materials have been checked and inspected for quantity and quality, they should be sent at once to the stock room. Here their receipt is entered on the stock-record card as described in the first part of this chapter, and then the goods are either put in stock or forwarded to the proper department.

**Invoice procedure.** There is no procedure for handling invoices that applies to even a majority of cases. It must suffice to say, therefore, that the procedure should be such as will enable the invoice clerk to pass the invoices through to the accounting department with the least possible delay. Except in the case of incorrect billing, invoices should be checked and passed on to the accounting department within twenty-four hours after receipt in the purchasing department. Short-term invoices, of course, should be specially marked.

A record of all invoices should be made on the back of the working copy of the purchase order. Provision should be made also for drawing attention to any special information the purchasing department personnel should have. For example, if the material is purchased on trial, that fact should be known so as to prevent the account being paid in the usual way. In other cases, goods may be purchased F.O.B. shipping point, with freight and cartage allowed, transportation charges to be deducted from the invoice. This information also should be known, and the accounting department advised of the fact, as invoices are very often paid to save discount before any debit is received covering transportation charges.

**Credits.** An accurate record should be kept by the purchasing department of any items supplied by the vendor which subsequently can be returned for credit. For example, containers such as barrels, carboys, drums, and reels usually are returnable. Failure on the part of the purchaser to secure such credits obviously indicates undue carelessness on his part. A form called "Authority to Return Goods for Credit or Replacement" is illustrated in Figure 109. This form is issued as soon as an invoice is received on which a charge for any returnable container is included in the total amount of the invoice. The "Authority to Return" number is noted on the purchasing department copy of the invoice, so that when the record clerk posts the invoice to the purchase record, where a special card is retained for

returnable containers, he enters the "Authority to Return" number on the record. This procedure acts as a check on the invoice clerk, because if the invoice clerk had failed to issue the form, naturally the number would not be shown on the invoice. No department should be allowed to return materials for any reason whatever without first re-

PRICE BROTHERS & CO., Limited.		Quebec, P. Q.	
AUTHORITY TO RETURN GOODS FOR CREDIT OR REPLACEMENT			
			No. 223
Mill, Kenogami		Date, _____	
Order No. K. 23123	Req. No. K. 8352	Invoice date, _____	Amt., \$275.78
Please arrange to return for		Credit Replacement	
To: Imperial Oil, Ltd.,			
Montreal.			
Via	Mail Express Freight	Collect Prepaid	the following:

Quantity	Description	Unit Price	Discount	Amount
9	Steel Barrels	\$8.00		72 00

Please send two copies of Advice of Goods returned to Purchasing Department. Original and copy Bill of Lading or Express Receipt to Traffic Department.

Price Brothers & Company, Limited.  
.....  
Purchasing Agent.

Fig. 109.—Authority to Return Goods.

ceiving authority from the purchasing department. This is a reasonable requirement, as the purchasing department, having purchased the goods, often has to communicate with the suppliers to obtain permission for the return. In practice it will be found occasionally that the materials that a department desires to return are exactly as ordered; consequently, it would be poor policy to return the goods without the authority of the suppliers.

When containers or other materials are returned an "Advice of Goods Returned for Credit or Replacement" is issued. This form is made out in triplicate, one copy for use by the department making the return, the other two copies being sent to the purchasing department. The orig-

inal and a copy of the bill of lading or express receipt, as the case may be, are forwarded to the traffic department.

On receipt of this form by the purchasing department, one copy should be sent to the consignee with the following notation:

Please arrange to issue credit immediately on receipt of above material.

Purchasing Agent

The other copy should be filed in the purchasing department numerically by claim number.

One company keeps a very careful record of all charges and credits for returnable items. After ten months' actual operation of this plan the credits were found to be approximately 8 per cent in excess of the debits. Such a figure seems to prove the value of the procedure, as it shows conclusively that returnable containers, which should have been returned and credited prior to the installation of the system, have since been returned and credited.

**Purchasing-department filing procedure.** The main divisions of an adequate filing system may be summarized as follows:

1. General correspondence—filed sectionally. Since most of the correspondence received by the purchasing department deals with some specific order or contract, and since such correspondence is filed numerically under the order or contract number, the general correspondence should be filed sectionally by the principal commodity classifications, such as bolts, office equipment, pumping equipment, and so on. The general-correspondence files also take care of quotations received for estimating or other purposes, which do not result in actual orders.

2. Order correspondence, including quotations—filed numerically according to order number.

3. Contract correspondence—filed numerically according to contract number.

4. Completed requisitions—filed numerically, the requisitions of each department being kept separate, and the whole bound in monthly volumes.

5. Acknowledgments of orders—filed alphabetically.

6. Completed orders—filed numerically.

7. Invoices—filed alphabetically according to firm names, a folder being retained for each firm.

**Summary of purchasing department procedure.** Figure 110 is a graphic illustration of a possible recording procedure for a large firm. This system is not as complete as

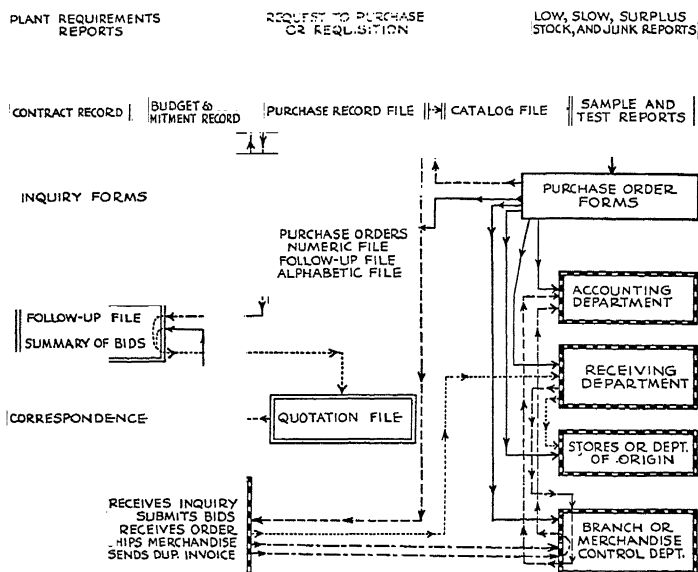


Fig. 110.—Diagram of Purchasing Procedure in a Large Company.

that described on previous pages because it assumes that the work of the purchasing department ends with the vendor's acknowledgment of the order, and that the receipt of the merchandise and approval of invoices is in the charge of a merchandise-control department at a branch office whose duty it is to receive and pay for the merchandise. Thus buying is the chief function of the department in this case. Most of the department's authorizations to purchase originate with individual requests or requisitions. For

basic materials, estimates of plant requirements act as or are transcribed onto requisitions. Reports of low stock may also become requisitions.

As indicated in Figure 110, requisitions go first to the purchase-record file, where commodity cards are attached to them. These cards show specifications, records of purchases, contract data, lists of vendors, summaries of latest bids, and other data useful to the buyer. Each request reaches the buyer with complete purchase information attached so that it can be acted upon promptly. For requests of a special character, other records or reference files are conveniently assembled. Budget records, if used, contracts or contract records, catalogue files, samples, test records, and so forth, are close at hand.

The buyer next makes his decision and instructs his typist. If the typist is to send out an inquiry or request for bids, she makes as many copies as required, preserving one and sending two to each vendor indicated. She enters the date on the purchase record, and the inquiry goes to a follow-up file. Vendors retain one copy of the inquiry and return one as a bid. This is attached to other bids in the follow-up file, after entry on a summary sheet. When the closing date arrives, a summary, with bids attached, goes to the buyer. He indicates the vendor and instructs the typist to prepare a purchase order. Bids are then filed either in a body in the quotation file under the proper commodity name, or with other correspondence by the name of the vendor. The typist then enters the purchase order on the purchase record, which is returned to the purchase-record file.

The purchase order provides as many copies as required. The original, with coupon or second copy (acknowledgment), is forwarded to the vendor. Two copies are retained by the purchasing department, one as a commodity file, the other going first to the follow-up file, awaiting acknowledgment, and then into an alphabetic "Finished Purchase Orders" file. One copy goes to the merchandise-



control department at the branch that is to receive the goods, and another to the stores division or to the department where the request originated. Other copies go to the receiving department of the branch that is to receive the goods and to the audit or accounting department.

Cancellations and change orders follow the same routine, affect the same records, and require similar forms. Merchandise rejections and returns reverse the procedure and affect most purchasing department records. Changes of price must be authorized by the purchasing department on a change order or similar form.

In this chapter purchasing department records and procedures suitable for a medium-sized or large company have been described in considerable detail. It should be understood clearly, however, that the specific requirements of each concern naturally will necessitate changes from the methods here discussed. The main point that the office manager should constantly keep in mind is that efficient purchasing department organization and operation necessitates constant attention to details. Whether his responsibility is direct or only functional, the office manager should assure himself that the system used is adequate—and entirely practical—for the needs of his company.

## CHAPTER XV

### *Office Management in the Credit and Collection Department*

It is obvious that an adequate system of records is absolutely essential to the successful operation of the credit and collection department. The nature and extent of the records needed naturally depend upon the nature of the business. Many department stores, for example, have only charge accounts, in addition to their cash business, and sell nothing on the installment plan. Other concerns sell on an open account and on installment, as well as for cash. Some organizations deal directly only with consumers; some, such as the Commercial Credit Company and the Commercial Investment Trust Company, deal with manufacturers, wholesalers, retailers, as well as with consumers. Whatever the exact relationship may be, it should always be remembered that credit is a very personal matter. Consequently, it is of the utmost importance that the record system be as nearly automatically accurate as possible. The honest person who pays his bills promptly when they are due resents nothing quite so much as to be told, through an error, that his bill is in arrears.

**Records the credit department needs.** The nature of the records kept by the credit department depends to some extent upon the sources used by the credit manager to secure information about applicants for credit, or other information on the nature of the business and the extent to which credit is granted. If the usual general rating books such as Dun and Bradstreet's can be used almost exclusively,

as is often the case in a manufacturing business, then it will hardly be necessary to maintain a separate customer's reference and rating card, as the rating of each customer given in the rating book can be placed beside the customer's name at the top of the ledger account. If, however, the concern is engaged in the retail business and consequently other sources are used, such as banks, personal references from others with whom the applicant has previously done business, and credit departments or files of merchants' associations, then it is practically essential that such a card be kept.

**Form of the reference and rating card.** As in the case of all other office forms, the exact nature of the data and

Name		Am't. of Credit	
Address		Date Established	
Source of Inform.	Rating	Remarks	

Fig. 111.—Customer's or Applicant's Reference and Rating Card.

its arrangement on the card vary widely. Whatever the details may be, however, the card should provide for such information as the name and the address of the customer or applicant and the kind of business in which he is engaged. The body of the card should

contain space for entering the sources of credit information used. To the right of this column there may be another space, left blank, in which may be written the ratings or opinions of the applicant as secured from the various sources of information. On another part of the record there should be a space in which may be inserted the amount of credit which it has been decided to allow the account, together with the date on which the rating was established. If subsequent events or dealings make it desirable to change the original rating, or if, as is often the practice, all credit-reference and rating cards are gone over periodically and revised, the card can easily enough be ruled to provide space for doing so. Figure 111 is an illustration of such a card.

The Customer's or Applicant's Reference and Rating Card is a useful and important record, because it provides for the accumulation, in one place, of all essential information as to references, as well as the rating established therefrom.

**Request for credit information.** Another record form widely used by credit departments and one which, in order of usage, precedes the Customer's Reference and Rating Card, is the Request for Credit Information.

This record may be merely a form letter sent by the credit department, in which it is requested that both general and specific information be furnished regarding the applicant in question. If, for example, the proposed sale is to be made to an individual and involves less than \$100, all of which will be payable within thirty days, nothing more than personal and bank references may be required. On the other hand, complete financial statements, including both a profit and loss statement and a balance sheet, may be asked for, particularly if an installment sale involving a considerable amount of money is concerned. For example, a concern may wish to purchase \$50,000 worth of machinery or equipment, proposing to pay \$10,000 (20 per cent) in cash at the time of delivery, payment of the balance of \$40,000 to be spread equally over the next twelve or eighteen months. Under such circumstances the customer's ability to pay the installments obviously depends primarily upon his future earnings, hence complete information regarding his financial status is essential.

When replies are received, the data are entered on the Customer's Reference and Rating Card and then permanently filed, usually in the customer's or applicant's credit folder.

**Record of Customer's Purchases and Payments.** In a previous chapter dealing with the records of the sales department, mention was made of the customer's record card, the primary purpose of which is to record sales made to different customers. The credit manager needs substan-

tially the same information, but he naturally carries the customer's relations with the firm one step further—that is, until the goods have been paid for.

The Record of Customer's Purchases and Payments usually has three main columns, one for purchases, one for payments, and the third for balance due, if any. Under each of the first two main columns there are a number of sub-columns for entering such information as the order number, date of the order, value of the order, date when payment was due, date when payment was actually made, explanation of late payments, and so on. A separate series of entries may be made for each order, or all information may be shown on a monthly basis, depending largely upon the nature of the business. The Customer's Record of Purchases and Payments should not be confused with the ledger account, which is merely a list of debits, credits, and reference numbers and cannot give such complete information about the relations of the company with each customer. Neither is the Customer's Record of Purchases and Payments expected to serve as a record of collections received from customers whose accounts are past due. Its purpose is simply to give a clear picture of the paying habits of the firm's customers.

Information the collection department desires. The collection section of the credit and collection department needs records which will show quickly the answers to these questions:

1. How much does the customer owe?
2. When was it due?
3. What efforts have been made to effect collection and when were they made?
4. When is it expected that the balance due will be paid?

Collection work centers around collection letters, which are of varying degrees of severity and which are sent to those whose accounts are past due. Collection letters are usually prepared in series, starting with simple notices that the payment is due and working gradually, but also very

definitely, toward the final "threat letter" in which the statement is made that if the account is not paid by a certain date, it will be turned over to an attorney or collection agency.

**Collection card.** The essential record of the collection division is one which shows the exact status in the collection process of all past-due accounts. A record often used for this purpose is a simple collection card. A separate record is kept for each customer. The top of the form provides for the usual information, such as name, address, and so forth. The body of the record provides for entering the various notifications, requests, and letters sent to the customer. One method often used is to assign a number to each such letter or request and print it on the form itself. As the notices are sent out, the date on which each is sent is entered opposite the appropriate number. In order to make possible an

automatic follow-up of any given account at a definite future date, a series of numbers, 1 to 31, each indicating a day of the month, may be printed across the top of the card. Thus if notice No. 2 is sent out on the tenth of the month, and it is desired to send notice No. 3 on the twenty-second, provided, of course, that payment has not been made by that time, a tab may be put over the number 22 at the top of the card. The card can then be filed with the other collection cards in the regular way, but will automatically be brought to the attention of the collection follow-up clerk on the twenty-second. Figure 112 shows a typical form of collection card.

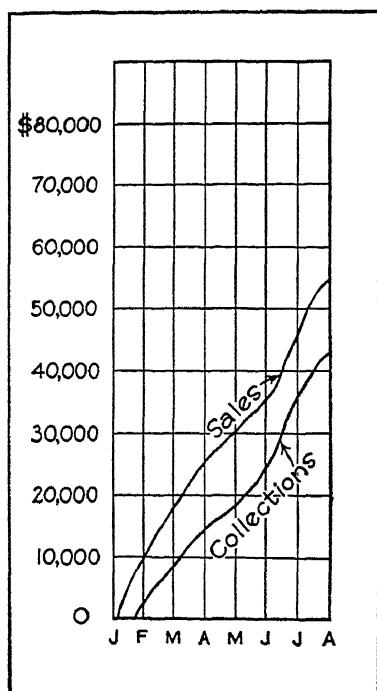
An important part of a systematic procedure for handling collections is a definite plan of coöperation between the collection and accounting departments whereby notice will

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			
Name		Address	
Notification	Date Sent	Final Action	Remarks
1			
2			
3			
4			
5			
6			
7			
8			

Fig. 112.—Collection Card.

promptly be sent to the collection department just as soon as money is received from an account. In smaller concerns this is often handled by sending all checks, as soon as they are received, directly to the credit and collection department. Here they are posted at once to the Customer's Record of Purchases and Payments, after which they are turned over to the accounting department for entry and deposit. In large companies the accounting department may prepare a daily summary of all payments made on accounts receivable. If some such plan is not followed, confusion within the organization will result, as well as ill will on the part of the customer, if he receives a collection letter covering an invoice or bill that he has already paid.

**Monthly report of total collections.** A summary record



that is often used by collection managers, as well as other executives, is the Monthly Report of Total Collections. The chief purpose of this record is to show the total actual receipts from all credit accounts. This report is made up at the end of each month and is based on the collections made during the month. If used in connection with a plan of budgetary control, this report may take the form of a record showing the comparison between estimated collections and actual collections.

**Sales and collection chart.**

Fig. 113.—Sales and Collection Chart.

In many concerns periodic

comparisons are made at least once a month and sometimes even daily between sales, total accounts receivable, past-due accounts, and collections. Such a comparison yields what is commonly known as a collection ratio. For example, assume that on March 1 outstanding accounts receivable totaled \$50,000. This total includes *all* accounts receivable, not merely those past due. Assume that during March \$60,000 was collected on all accounts receivable and that during the month total sales made on credit were \$75,000. The collection ratio for March would then be found by adding the outstanding balance as of March 1 (\$50,000) and the total credit sales during the month (\$75,000) and dividing the total collections for the month (\$60,000) by the sum (\$125,000). In this case the collection ratio would be 48 per cent. Such a ratio is obviously a fair and accurate method of judging the results of the collection work.

Such figures are sometimes made the basis for plotting two simple line diagrams. The maintenance of an even spread between the sales line and the collection line indicates a normal condition. By making the total figures for sales and collections cumulative month by month, the changes in this ratio during the entire year can easily be observed. Such a chart is a practical device whereby the sales manager and the collection manager, and other executives of the company as well, may keep their fingers constantly on one of the most important phases of any business, namely, the amount of working capital available at any given time. Figure 113 illustrates such a chart.

A simple system used in a medium-sized company. The following paragraphs describe the essential features of a simple credit and collection system used in a medium-sized company.<sup>1</sup>

The basis of the system is the 4 by 6 card shown in Figure 114. At a glance the record shows name and address of the

<sup>1</sup> "Keeping Credit Data at Your Finger Tips," *The Office Economist*, January-February, 1935.



account, various ratings, and credit limit allowed. When an order is received for credit authorization, the date and amount are entered in the proper columns. Payments are entered by a symbol in the How Paid column. The accompanying illustration uses the following symbols: D, Discounted; M, Maturity; 14, 14 days after maturity. The special transaction is described

[illegible]

Fig. 114.—Credit and Collection Record.

in the Remarks column. All special arrangements such as notes are entered in a different colored ink so that they will stand out sharply.

A single glance at this card instantly shows the amounts open on current account and the customer's paying habits in the past. Over a period of time, this record becomes even more valuable, because it immediately indicates seasonal or other irregularities by the customer in meeting his obligations and definitely shows the trend of an account—whether it is on an even keel, lapsing into slowness, or forging ahead to a more prompt basis. A brightly contrasting ink, used to indicate delayed payments, serves as a warning signal. When collection effort is necessary

a red or green signal is attached to the edge of the card to indicate that collection efforts are under way. When these have been terminated, a brief notation in the Remarks column tells of the final disposition of the matter.

Some credit record cards have a space marked Routing. This is not necessarily a function of the credit department but it has been found, by experience, that this little extra check has saved both time and money. First orders almost invariably contain definite shipping instructions. In time, however, buyers believe their desires to be so well known that specific notations are needless. Confusion sometimes results. When the credit department has before it a permanent notation as to the routing of orders it can, without loss of time, check this feature on orders received. By so doing, it narrows the possibility of this factor being overlooked or misinterpreted elsewhere.

### Coördination of credit and sales records.

If it is desired to have the credit record coördinated with sales records for later statistical analysis or coöperative action, the Remarks column can effectively be used. For example, an order is received on June 5 for items X, Y, Z. Under Remarks an entry is made of X, Y, Z, with, if desired, a numerical symbol to indicate quantity, such as 1X, 2Y, 3Z. Further orders are entered in the same way. In running through the cards in October, the credit manager notices that no subsequent orders have been received for item Z. A memo to the sales manager may disclose that salesmen have not been pushing this item with proper energy to this particular account.

A glance may also show the receipt of regular orders in petty amounts from a house that uses large quantities of the item in question. This condition may be due to sales neglect or other factors. It may show up the fact that certain customers are really unprofitable because of their piecemeal buying methods and the overhead entailed. After fully investigating this state of affairs, many progressive houses have dropped such accounts from their books. Of course this credit record immediately shows when there has been an unusually long time between orders.

It is not meant to suggest that the credit department should arrogate to itself the functions of the sales division or that credit records should take the place of sales data. The instances cited, all of which are standard practices with many progressive concerns, are specific illustrations of the kind of coöperation

between credit and sales departments which help develop a good volume of healthy business. The suggestions are but indications of the wide adaptability of this relatively simple record card and the amount of data that can be kept thereon in small space.

While this system can be maintained in ordinary card index files, with alphabetical guides, it is far more satisfactory when used as a visible index in cabinets. Visibility avoids the need for "digging out" information, thus saving time. It cuts down the possibilities for mis-filing and makes "lost" records almost an impossibility. A visible system offers an opportunity for getting a quick birdseye view of all accounts that is impossible with non-visible equipment.

In the type of file cabinet best suited for this system, 3000 cards can be easily housed in a cabinet occupying a space of approximately four square feet. The standard form used is double size when opened. Thus the 4 by 6 form illustrated in Figure 114 is  $7\frac{3}{4}$  by 6 when open, permitting a larger number of postings, increasing the life of the sheet and making a more compact record with fewer cards. In addition, when the two inside pages are filled, the form can be refolded and the same continuous postings obtained on the reverse side. This saves two extra headings and gives a continuous record.

The system described is extremely simple and capable of easy expansion, unit by unit. It offers flexibility in that if desired, accounts can be grouped and the files placed directly alongside the individuals who use them. Because of the facility with which references can be made, one employee can handle as many as 15,000 accounts, all housed in a number of cabinets, placed on a working desk.

**Summary.** In determining the records and the record-keeping procedure needed by a credit and collection department, too much emphasis cannot be laid on the fact that a systematic plan of procedure which will result in both promptness and accuracy must be worked out and maintained. Obviously the effectiveness with which this department is operated has a very direct bearing on the status of the working capital account of the company. In the opinion of many financial authorities, the maintenance of a proper working capital fund may spell success or failure for a business. Only by having an adequate system of record control in the credit and collection department will the greatest effectiveness of operation be secured.

## CHAPTER XVI

### *Branch Office Management*

Although branch offices often deal primarily with sales matters, the office manager frequently has many direct relations with them. In some concerns he has functional control of the office work at all branches. In other companies the general office manager at headquarters is responsible for standardizing the office work at all branch offices, even though the local office managers report directly and only to the branch managers. And even in those organizations in which the general office manager has neither direct nor functional responsibility or authority for branch office work, he still must deal constantly with branch office reports and records as they affect the work of the main office. Thus, whatever the specific organization relationship between headquarters and the branches may be, branch-office management is an important part of the work of the average office manager.

**Relationship of the office manager to the branch offices.** The following table summarizes the findings of a study of the relationships between the office manager and branch offices <sup>1</sup>:

Type of Business	Complete Control	Partial Control	Advisory Control	No Control	No Branches
Manufacturing .....	4%	30%	36%	30%	—
Insurance and banking ....	—	30%	30%	20%	—
Social service and education .....	—	—	50%	50%	—
Public utilities .....	—	50%	—	—	50%
Commercial enterprises ....	100%	—	—	—	—
All types of business .....	15%	15%	40%	20%	10%

<sup>1</sup> Keany, Mathew and Lamb, Philip A., "The Status of the Office Manager," *Annual Proceedings*, p. 67. National Office Management Association, 1929.

In commenting on the results of this survey the authors said:

The figures for the manufacturing and insurance and banking groups should be fairly reliable but the figures for other types of business are not reliable, since insufficient data were collected for their compilation. They are merely included for what they are worth. In general, the office manager has advisory control only over the branch offices. This tendency appears to be more pronounced among the manufacturing concerns than it is in the insurance and banking group. However, all of the manufacturing concerns that answered the questionnaire had branch offices, while 20 per cent of the insurance and banking concerns did not. This fact probably influences the percentage of office managers having advisory control, and furnishes the basis for the conclusion that there is just about as much advisory control in one group as there is in the other.

Looking at all types of business as a whole, it appears that only 15 per cent of the office managers have complete control over the branch offices, while another 15 per cent have partial control. In the concerns where partial control is the policy followed, the branch offices are probably required to use the same methods that are used in the home office. Forty per cent of the concerns have office managers who act in an advisory capacity only. This seems to be the most favored relationship, and it is our opinion that in most types of business this relationship is the most suitable. Twenty per cent have no control and 10 per cent have no branch offices.

**Classification of branch offices.** Branch offices may be classified as follows:

1. Those that function as independent units, such as subsidiary companies operating in foreign countries. In this case one usually finds a complete unit comprising a factory, sales offices, and offices of other departments. If the branch is incorporated, all the transactions incidental to a complete corporate unit are present.

2. Branch sales offices where a specified territory or area is assigned for the distribution of the product. Here is found a complete branch unit—merchandise is purchased from the home office (at least theoretically); sales are made; customers' accounts are kept and collected; cash

is banked and the expenses incidental to sales are paid; and the balance of cash is remitted to the home office. Such a branch may have sub-offices, in which case this type of branch takes on the complexities of a complete commercial unit.

3. In some cases the branch is a combination of agency and branch, the goods being shipped on consignment and the manager being treated as an agent or dealer who owns the business (at least theoretically). In this case accounts receivable are kept at the home office.

4. A retail store where goods are sold for cash or credit or both. Income is remitted currently to the home office, where all expenses are paid, excepting petty cash disbursements. Here the main responsibility of the branch office is the custody of the goods and accounting for the proceeds in cash or credits.

5. Finally, there are combinations of any two or more of the foregoing. Consideration has not been given to factory units, which in some instances may be regarded as branch units.

**Types of branch office organization.** A frequent criticism of branch organizations is that they tend to kill individual personality and effort. Thus, a local organization often is more effective from a sales standpoint than is a branch of a national company. To offset this, however, line control is sometimes used, the managements feeling that to give a man rather complete and sole authority within his sphere as to policies, execution, and review offsets the "cog in the wheel" feeling. In a nation-wide company, however, line control is not always practical. Local conditions vary widely. Often there are totally different methods of handling the details of the business. Even vital policies are often administered along different lines, even to the extent of price variations, to say nothing of general company policies such as credits and collections, merchandise returns, pay rates, hours, and vacations. A purely functional organization, on the other hand, often

makes discipline difficult. Lines of authority and responsibility are not fixed, with the result that friction may develop. A line and staff organization tends to breed committee action, and this may lead to constant conferences and slowness or indecisiveness, which often are associated with committee action.

A combination of line and functional control often works well. Most companies cannot afford to maintain technically or highly trained and experienced practical men in the individual branches, or even in groups of branches. Expense is all-important. Therefore, the home office, or, perhaps, certain major district offices, may maintain an organization to which these experts belong. Thus there exists a functional organization, at least in part. To maintain discipline and to insure execution of the functional director's policies, however, there must be line chiefs.

A survey of relationships between main and branch offices. In 1929 Mr. Henry W. Smith, Assistant Vice-President of Retail Credit Company, Inc., made a comprehensive survey among forty-nine companies engaged in a wide variety of lines of business covering the supervisory relationship of the home office to the branch offices. The results of this survey are summarized in the paragraphs that follow.<sup>2</sup>

### Chief duties of the branch manager.

The chief duties of the branch managers were reported to be as follows:

Sales management .....	44
General office supervision .....	18
Service management .....	15
Credit management .....	10
Engineering and plant supervision .....	6

As the figures indicate, the manager quite frequently combines one or more of these functions. This is nearly always the case

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<sup>2</sup> Adapted from Smith, Henry W., "Branch Office Management," *Handbook of Business Administration*, edited by Donald, W. J., published for the American Management Association by McGraw-Hill Book Company, Inc., New York, 1931.

whenever specialized departments exist in the office, such as credits, sales, and service.

There is some correlation between the reason for establishing a branch and the chief duties of the branch manager. Since the large majority of the companies reported service to the customer as the primary reason for establishing branches, it is only natural to find that the majority of the branch managers are either sales managers or at least are responsible for the sales organization in the branch. Customer service and contact obviously go hand in hand with sales supervision. Many companies which reported that the branch manager is sales manager also indicate that he is a service manager and that general office supervision is a prime factor of his job. However, the sales manager is often relieved of detailed supervision of office activities.

### *Supervisory organization.*

Usually there is some sort of supervisory unit between the home office and the branches. There is generally a geographical division arrangement under which each branch is assigned to a territorial headquarters. The terms "district" and "division" are the favorite names for the intermediate supervisory offices. Some organizations with many and far-flung branches have two intermediate supervisory units between the home office and the branch. For instance, there may be a zone or regional headquarters in charge of the vice-president or assistant vice-president; there may be three to eight zones in the United States and Canada; each zone may have two or more districts under district managers, and each district manager may supervise several branches. Sometimes subdivisions or districts are under larger divisions. All this is found before the actual branch office where the product is handled and sold is reached.

Sometimes there is no intermediate supervisory set-up in the field but, instead, one is established in the home office. For instance, the operating vice-president may have three assistants, each fully responsible for a third of the entire territory. Occasionally there is a territorial division in the home office, together with a territorial division in the field. One cannot suggest any determining factor here, unless it be the multiplicity of the field units.

In general, the home office seems to prefer to establish territorial headquarters—five or ten perhaps—instead of endeavoring to supervise directly seventy-five or one hundred branches. The reason for this form of organization is obvious. Home-office



supervisory power tends to break down when branches increase beyond twenty-five, because beyond this point it is impractical to keep in close touch with what is going on in each branch, or at least, with what should go on. The territorial grouping, with proper authority in territorial headquarters, is the logical answer. Presumably supervision of this character is justified by more effective results obtained at individual branches—otherwise the cost cannot be justified. A division manager with only ten branches to supervise should pay his way without difficulty. Just how large a force he needs depends upon the functions he performs and the results obtained. Sometimes he is alone, acting essentially as a traveling supervisor. In other cases he may spend most of his time at his headquarters supervising various staff operations such as training, accounting, credits, and collections, thus relieving the individual branches of such work and leaving them comparatively free, small, and effectively organized for concentrating almost entirely on sales.

Probably it can be said that the closer the territorial or branch supervisory head is to home-office executives in rank or grading, the more is he a home-office man in attitude. The closer he is to the top management group, the better he will reflect the ideas, attitude, and policies of the management; the better he will interpret to the field the spirit and desires of the management. In some businesses the management can afford to be farther from the firing line than in others. Where it is necessary for individual branch offices to reflect the management thoroughly, it is essential, particularly in a large branch organization, that one or more intermediate supervisory strata be established.

*Home-office organization for direct supervision of the field.*

At the home office itself there is usually one department or one executive who is the focal point to which the entire field organization is directly responsible. This does not necessarily mean that the field must deal with the home office solely through this one channel nor that other departments of the home office are required to deal with the field through this one outlet. It is the point of authority, however, through which operating instructions and critical or corrective management are released, or from which approval must come for staff or functional departments to deal with the field on other than regular routine matters. It is the point to which the field may look in case of a conflict of home-office instructions originating in different departments of the business.

*Line of authority.*

Almost without exception, the line of authority runs directly from the home office through the next stratum of supervision on down to the branch. Obviously a division manager must have line authority if he is given supervision of several branches. Authority commensurate with line responsibility is vital. This line of authority does not require, however, that all dealings be through the field-organization channel. The home office often deals directly with the branches and vice versa. Such contacts, however, are largely in connection with routine operations. In matters of management, promotion, and reprimand, the line channels are used—from home office to territorial headquarters and from the latter, in turn, on to the branches.

In case of a disagreement between the branch and the home office, the home office executive in general charge of the field organization is usually the final arbiter. For instance, assume that a branch manager disagrees with the home-office accounting department on a matter of policy or procedure. The manager refers his case to the district manager, who, if he agrees with the branch, sends it on to the vice-president in charge of operations, or in the case of a sales organization, to the vice-president in charge of sales. The latter takes it up with the head of the accounting department or with the chief financial officer to whom the head of the accounting department reports, and an agreement or decision is reached which, let us assume, is negative to the manager. The decision is relayed to the division manager by the head of the operating department, who in turn informs the manager. If the point is of some consequence, the division manager probably will write the local manager and also make plans to review the matter with the manager personally at the first opportunity.

*Centralization versus decentralization of clerical work.*

The larger the branch territory, or the more intensely it is worked, the more the clerical work devolving upon the branch. Two factors of particular importance in considering the matter of decentralization of clerical operations are:

1. Nature of business and kind of product. For instance, it would be better to decentralize billing and collections for a small article sold in quantities to many customers in a branch territory, especially where follow-up or repeat orders are frequent. Sales of fire-engine trucks, on the other hand, would be billed and collected through the home office.

2. Size and intensity of sales results of the branch territory. The larger the territory and the higher the volume of individual sales, the more logical it is to establish rather complete office operations in the branches.

Most organizations covered in this survey have decentralized clerical operations and such functions as billing, collections, and payment of minor current bills. One prime reason for this is that the branch obviously knows local conditions far better than does the home office and thus can work out adjustments and extensions with its customers much more satisfactorily than could the home office. Furthermore, decentralization relieves the home office of an enormous detail job which it could not handle as well as the branch.

### *Standardization.*

The setting of standards, both as to methods and costs, is also an important type of relationship between the main office and its branches. The following tabulation summarizes the practices of the companies covered in this survey on these matters:

<i>Items Standardized</i>	<i>Number of Companies Answering Affirmatively</i>
Form of organization .....	45
Office methods .....	44
Operating instructions .....	41
Type of personnel .....	23
Size .....	10
Volume .....	8

Note: Type of building, equipment, store fronts, sales talks and training also were mentioned in some cases.

It is interesting to note that size and volume play practically no part in standardization. Within the individual company, form of branch organization, office methods, and operating instructions meet with a high degree of standardization. Type of personnel, though much more of a variable than the definite elements of systems, often is standardized as far as possible. Standardization of personnel is not usually a scientific standardization but rather the establishment of rough general bases upon which, for example, sales managers are selected from tried and capable salesmen, and office managers are chosen from those well grounded in the accounting work. Selections are based on general fitness, age, and education, physique evidently having little influence. The wisdom of standardization of the impersonal

things is so apparent that it needs no argument or support. The practice provides ease and flexibility of operation and ease of opening branches. It also leads to savings through the interchange of equipment and personnel.

**Practices of the American Optical Company.** In this company the United States is divided into nine districts or zones, with a district manager in charge of each zone. The branches are primarily sales offices, but each one has a small factory to take care of the many service demands of 30,000 customers. The central organization has four principal relationships with the branches: sales; finance and accounting, which includes credits and collections; merchandise or stock control, which has to do with the actual handling and storing of the products; and the branch shops, which constitute a production problem.

The heads of these four functions are the key people of the business under the chief executive officers. They establish the policies, and, after the approval of the chief executives, they see that they are carried out. They operate, however, wholly through the zone managers. In the large zones the zone manager may or may not have under him a sales manager, a finance and accounting manager, a stock control manager, and a shop manager. If he does, reports go from these functional managers, through the zone managers, to the central office chiefs of the respective functions. The zone manager has direct charge of all branches in his territory, and the functional managers under him operate through the branch managers; but they maintain no direct authority over these branch managers. The zone manager is the branch manager's only chief, and the functional manager also recognizes the zone manager as his only superior.

**Centralization versus decentralization.** The district offices were set up originally with the idea of not having any branch more than a day away from its district point, and the company still follows this plan rather closely. The sending of monthly statements of accounts from a central point to customers all over the United States effectively pre-

vents a wholly centralized control. Merchandise can be shipped from main distributing points to be redistributed more cheaply than can many small shipments going direct from a main point. Salesmen, if routed from one central point, lose both time and money. Every traveler is localized as much as possible. On the other hand, buying can, and should, be highly centralized.

Each branch of the American Optical Company "buys" its merchandise from its district office, stores it for quick service, and distributes as the customer requires. It is a selling office, but no matter how hard they tried, the executives of this company have never been able to make an office manager out of a salesman. The company has not deemed it advisable or practical to maintain bookkeepers, at each branch, who might also act as office managers, because of the prohibitive expense that would be involved.

What then does a branch do in the way of record-keeping? It receives merchandise, accompanied by an invoice in duplicate. It records in a triplicate record book each invoice as the goods are received. A copy of the invoice properly approved is forwarded to the main office, and a duplicate is mailed to the district office. This is called a Purchase Report. The branch has a petty cash fund, recording each item disbursed on the same kind of triplicate record. Once a week the first two copies go along with the Purchase Reports. This is the Cash Paid Out Report. This cash fund is reimbursed weekly direct from the main office. Invoices go out daily as customers' orders are filled. Each night copies of these go to the district office. Customers' remittances are sent to a branch and are forwarded daily to a district office. Generally speaking, this is the only bookkeeping required of any branch.

**Methods used in district offices.** The district office, like the branch office, is primarily a sales office; but, whereas the branch is purely local in character, the district office covers the whole district through its supervision of branches and its road salesmen. The company's products are rather

technical in nature and somewhat difficult to handle, merely because of their number and variety. For this reason specialty salesmen are necessary, and their concentration at the district office is economical and conducive to real customer service.

At the district office there is a main finished-stock depot, which operates similarly to a branch except that its customers are its district's branches. This stock is controlled through perpetual inventories kept at the main office. However, no detail records are kept by the branch.

Customers' ledgers are kept at the district office under a credit manager, who has charge of all credits and collections in his district. All transactions affecting these accounts are reported monthly to the main office through a Journal Entries report. This is a series of journal accounts, summarizing by control amounts cash received, sales, and returns.

At the main office there is one bookkeeper for each zone who keeps the zone ledger, audits the reports from branches and districts, and prepares the monthly statements, balance sheets, and operating accounts. The general ledgers, one for each zone, are posted directly from the weekly and monthly reports. When business is conducted in all the states and in so many cities, the item of tax returns alone is a very important one. The centralization of this activity makes possible very large savings in clerical work as well as professional assistance, and, what is perhaps more important, it makes possible a uniform method of handling.

**Branch office methods of the Retail Credit Company.** The Retail Credit Company is an organization that furnishes reports on individuals to various kinds of insurance companies for underwriting purposes. These reports are really not credit reports, but reports on the man, primarily to cover moral hazard. The company has been in business since 1899, and has worked out a very definite system of branch office control. This system is necessary because, while the branch of the average company is used only by

people in the territory of that branch, the situation in this company is reversed, and the customer of the branch office is usually not located in the territory. As a customer uses any or all of the branch offices, it is necessary that the service carry certain standards and a uniformity that stamp it as Retail Credit Company service, irrespective of whether it comes from Maine or Texas, Quebec or Hawaii.

Each branch is responsible for results and service in its territory. The territories are drawn by state, county, or provincial lines. One offices does not overlap the territory of another. The branches vary in size, from a personnel standpoint, from a one-person office to a sixty-person office. Most of them, however, operate with a personnel of about ten people. The branches are really service branches; soliciting or selling is not their responsibility. Their function is to render satisfactory service on the business that is sent to them. The selling department is a special organization operating from the home office.

**Accounting.** All regular expenditures, such as rent, towel service, and so on, are taken care of by the home-office accounting division. Practically all bills are approved by the branches and sent to the main office for payment. The branch offices do no bookkeeping whatever. A central bank account is carried in New York, on which any manager can draw if it becomes necessary. The branch offices, therefore, do not have a revolving cash fund. Collections are not handled by the branch offices. Each day the results of the day's operations are turned in to the home office, where credit is given and the customer charged. Credit, from the standpoint of either the branch or the home office, is not a problem with this company. All of the stationery and office supplies are furnished from the home office, and, therefore, all printing and other materials are uniform throughout the organization. All furniture is standardized and is purchased either by the home office or by the branch manager under specific instructions as to the standard. Office space also has been standardized

to a large extent. The company has learned by experience the shape of office that best suits the work, and the number of square feet needed for various types of employees. By forecasting the approximate volume of business a year or two in advance, the company is able to operate with a minimum amount of space and expense.

**Organization supervision.** In order to keep the service uniform and standard, close control is exercised. All branch offices are divided into a few major groups. Each group is headed by an executive in the home office who is responsible for getting results through the managers in his group of offices. Each of these executives has two assistants—an examiner and a reviewer. The home-office executives who are in charge of the five groups are responsible directly to the operating vice-president.

**Standardized procedure.** All clerical details are carried out in a standardized way, although the actual motions need not be standardized, except in a few instances. The primary aim is to have the results standard. For example, all the files are operated in the same way at each branch office, and all of the notations and symbols are the same. Employees do their work according to the standard, even though they think some other way is better, until the standard is changed. The thought underlying this practice is that if a manager of a branch office should leave the office one evening and never be able to go back, his successor could step in the next day to run the office, and would know immediately the status of what had been done with every report. Until these matters were standardized, it was not possible to do this. Now a relief man can be and frequently is sent to an office, but he need not arrive until the morning after the manager has left on vacation, or has been called away on account of sickness.

The personnel is standardized in all offices of a certain size. That is, a one-person office has only a manager; a two-person office has a manager and a girl stenographer; a three-person office has a manager, a stenographer, and a



young man as office service clerk; and so on. All branch offices are provided with instruction cards covering each branch office operation. Each position in the branch office is covered by an instruction manual. The new employee studies this manual, and the office always has it as a source of reference. A section in the home office prepares the manuals, which are loose leaf, and they are revised from time to time as details or instructions are changed.

**Training.** Harmony is maintained between the home and branch offices by extensive travel in the territories of the various offices. The examiners visit each office in their particular group on an average of four times a year, and the executives, twice a year. From time to time the managers and some of the more experienced employees are brought in to the home office, where they may spend a week or so, or in certain instances form a school group for a month or more of special training. When an employee reaches his limit of progress in a branch office he is transferred to the general organization. Such employees are usually given a course in the training school, which is maintained at the home office. The men from the training school go into the organization; some as managers, some as relief men, and others as special representatives of various kinds. The promotion of branch office employees to the general organization has effectively served to link the home and the branch offices closer together. All managers are held directly responsible for the results of their offices, as well as for the development of their employees.

## CHAPTER XVII

### *The Office Manual*

In large organizations a standardized yet simple and inexpensive method of informing employees about company policies and rules, and of giving them specific instructions regarding their own duties, is practically essential. This is the primary purpose of all office manuals. Innumerable large organizations, such as Westinghouse Electric and Manufacturing Company, Jordan-Marsh, Metropolitan Life Insurance Company, New York Telephone Company, Graton and Knight Manufacturing Company, Irving Trust Company, Dennison Manufacturing Company, and R. H. Macy and Company, have used manuals successfully for years. In addition, many smaller concerns engaged in a wide variety of businesses find the use of manuals well worth while.

A manual used in 1856. The fact that manuals have been used for years is interestingly illustrated by the following *Rules for Employees* which was brought to light during the celebration of the eightieth anniversary of the Carson, Pirie, Scott and Company store in Chicago. The rules for employees of the first store read as follows <sup>1</sup>:

Store must be open from 6 A.M. to 9 P.M. the year around.

Store must be swept; counters, bases, shelves and showcases dusted. Lamps trimmed, filled and chimneys cleaned; pens made; doors and windows opened; a pail of water, also a bucket of coal brought in before breakfast (if there is time to do so) and attend to customers who call.

<sup>1</sup> Life Office Management Association Bulletin, p. 4, March 15, 1936.

Store must not be opened on the Sabbath unless necessary, and then only a few minutes.

The employee who is in the habit of smoking Spanish cigars, being shaved at the barber's, going to dances and other places of amusement, will surely give his employer reason to be suspicious of his integrity and honesty.

Each employee must not pay less than \$5 per year to the church and must attend Sunday school regularly.

Men employees are given one evening a week for courting and two if they go to prayer meeting.

After 14 hours of work in the store, the leisure time should be spent mostly in reading.

**Advantages of using manuals.** Several advantages accrue to organizations that make use of office manuals:

1. The manual serves as an excellent medium whereby new employees may be trained. A Chicago concern, for example, reports that it reduced the time and cost of training employees from 60 to 75 per cent by the use of manuals.

2. The use of manuals recognizes the "put-it-in-writing" principle. Reference has already been made in a previous chapter of the increasing adoption of this principle. The office manual is a specific example of why and how positive, definite information regarding company rules and policies, as well as the duties of each employee, may be put in writing.

3. When instructions are reduced to writing, in manual form, employees cannot evade the responsibility of knowing what the manual contains. The office manager who does not have manuals in use is continually faced with the new employee's statement that he did not remember what was said, or that he misunderstood the instructions given him. When verbal instructions regarding duties or rules are given at the time of employment, these two excuses never can be satisfactorily refuted. If, however, manuals are prepared and given to new employees at the time of their employment, and if new workers are told that they are expected to read the manual and will be held responsible for

a knowledge of its contents, a troublesome problem can be avoided.

4. The preparation of a manual affords an excellent basis for the further development and standardization of company, departmental, and individual procedures. Refinements and developments can best be carried on by reducing present procedure to writing.

5. While a manual is being made up, many overlapping functions and unnecessary duplications of work are revealed. Departmental procedures, as well as relationships between divisions and sections, that have developed solely as a result of the passage of time rather than through any systematic planning are found in many cases to be most unsatisfactory. A manual setting forth present procedures clearly and specifically gives an excellent basis upon which to eliminate inconsistencies and reduce wastes resulting therefrom. Furthermore, its preparation forces the determination of the easiest, surest, and the most productive way of getting things done, the way that has been proved best by experience and study. By establishing and recording that method, the manual makes it the habitual way.

6. By telling each individual to whom and for what he is responsible, manuals define responsibilities and prevent errors. Their preparation brings to light error-breeding situations that can be corrected. The effect is to decrease misunderstandings and errors, and to move work along more smoothly and more rapidly.

7. Change and growth sometimes bring about overlapping of departmental functions, while at other times they create gaps between them. The attention necessarily given to the definition of duties and responsibilities in the preparation of manuals leads not only to a better and more accurate dovetailing of departmental responsibilities, but also to their more complete coördination.

8. If the initial preparation and later revision of a manual is made a coöperative effort, with the chief burden for its effectiveness placed where it belongs—on the man

responsible for getting out the work—it becomes a powerful incentive for constructive thinking. Every business needs men who can think originally and progressively. Such men, to a certain degree at least, have to be made to order. Their discovery and development is in itself an important job that will be furthered by systematic efforts to establish correct practice.

9. Last, but by no means of least importance, it should be remembered that matters that may be entirely clear to the trained or experienced person are not necessarily so to one just entering the organization. Furthermore, fitness as an executive does not necessarily include fitness as a teacher, and, as a result, explanations of methods of doing work may not always be entirely clear. The preparation and use of a manual overcomes such difficulties.

**Objections to manuals by employers.** When the preparation of an office manual is proposed by the office manager or others, objections are sometimes raised by employers and employees. It will be worthwhile, therefore, to summarize the more usual objections and to comment briefly on each.

1. "Too much red tape." This is an objection often raised against any innovation. Any change from traditional methods is frequently looked upon in this light. While not all changes are improvements, the establishment of standards is a distinct step forward. One might with equal logic, or, more correctly, with equal lack of it, urge that a change from single-entry bookkeeping to a double-entry system involved too much red tape.

2. "Costs too much." It cannot be denied that the introduction of standards usually involves some expense. However, just as in the case of the introduction of a cost accounting system, or as in the case of a move from one office location to another, the work of standardization should be regarded as an investment which, while possibly somewhat expensive in initial outlay, is one that will yield excellent returns.

3. "Our business is different." This is perhaps as easy an objection to answer as any. If the business is so different, is not that fact itself the best reason why the employees should be fully informed regarding company procedure? What better means could be found for effectively carrying out this objective than an office manual and written practice instructions?

4. "Our company is too small to derive sufficient benefit from standardization to justify the cost." The answer to this objection is simply that the smaller the business, the more worthwhile it is to do everything possible to save money and make things run smoothly. That an office manual and written practice instructions will do these two things is for the promoter of the idea in each organization to prove. If he cannot prove it, and prove it conclusively, he has no right to try to impose his ideas on his organization, and he certainly is not qualified to carry on the work of introducing better management methods.

5. "Good in theory, but not practicable." The fact that a large number of companies are making successful use of manuals proves that they are sound in practice as well as in theory. However, any kind of system which does not have the full coöperation of executives and department heads cannot possibly succeed for any length of time. If the principal executives rather openly admit to the employees, by actions as well as words, that they are not entirely sold on the idea, one can naturally expect nothing except the same attitude on the part of the employees.

### Objections to manuals by employees.

1. "Restricts individual initiative." It would be just as impractical to say that all rules formulated for the conduct and guidance of employees restrict individual initiative. Office manuals and written practice instructions are merely rules and suggestions governing certain activities. Viewed in the proper light, they are distinct aids by which the employee is helped to do better work. Moreover, it should be

borne in mind that anyone who has constructive suggestions for improvements in methods usually has an opportunity to make them. It has been the experience of many office managers that those who urge the point about restriction of initiative most vigorously are the same ones who have the least to contribute in the way of constructive suggestions for improvement.

2. "More efficiency methods." This is frequently the cry of those who are content to "get by" with doing as little work as possible, and who see, in the introduction of standards, a device whereby they will be forced to measure up or else be marked for dismissal. Those who are unwilling to coöperate should be eliminated.

**Kinds of manuals.** There are four principal kinds or types of manuals in use in business organizations:

*The general information manual.* Such a manual usually gives some brief information regarding the history and growth of the company, the kinds of goods or services that it sells, promotional policies, and other material of a general, informational character.

*The office rule book.* The office rule book is often combined with the general information manual just mentioned. Office rule books are widely used. Such subjects as the time and method of paying employees, holidays observed by the company, rules regarding lateness and absence, lunch hours, and other company regulations with which the new employee should be acquainted, are clearly and specifically set forth. Often such rule books also contain more or less detailed information regarding the personnel and welfare activities that are carried on in the interest of the employees. If, for example, a coöperative store is maintained, or if a company lunch room is operated, the rules governing the use of these facilities by the employee will be given.

*Departmental standard practice instructions.* Such manuals contain concrete and specific information regarding the work of the department in question, the relation of the department to other departments, the way in which

the work of the department is carried on, and other information of a similar nature. The outstanding characteristic of such manuals is specificity.

*Individual instruction sheets.* In large concerns, where a high degree of specialization of work by individual employees is possible, departmental standard practice instructions sometimes are further broken down into desk sheets or instruction sheets for each individual employee or small group of employees. Thus there may be a departmental standard practice instruction manual covering the work of the mailing and messenger department as a whole. In addition, however, individual instruction sheets may be prepared for each employee, showing exactly what his duties are throughout the day, and coördinated with a definite time schedule.

Manuals in use in a typical manufacturing company. The following constitutes the manual equipment of a typical manufacturing company.<sup>2</sup> The manuals are supplemented by thoughtfully designed forms, which also help to establish the approved or correct practice.

1. *How to Receive Callers.* This manual opens with an interesting discussion of the work of the "Receptionist," continues with kinds of greetings, and general comments on dress and personality. It provides also a rough classification of callers and the names of the executives to whom they will ordinarily be referred.

2. *Telephone Etiquette.* Discusses the importance of the telephone operator's work in creating and holding goodwill; gives a list of approved greetings, and some general hints on the operation of the switchboard; contains a list of the personnel, with the duties of each individual.

3. *Correspondence Manual.* This manual is made up almost wholly of form paragraphs and letters to meet the most commonly recurring situations arising in the company correspondence. It also summarizes policies on complaints, cancelations, and special orders.

4. *Stenographer's Style Book.* Consists of half a dozen

<sup>2</sup> Butler and Johnson, *Management Control Through Business Forms*, pp. 176-177. Harper & Brothers, New York, 1930.



pages of facsimile letters showing approved margins, spacing, paragraphing, spelling of trade terms, and the like. The subject matter of the letters discusses the importance of clear, accurate typing, correct spelling, division of words, and the general duties and responsibilities of stenographers.

5. *Incoming Mail.* This manual gives a general classification of incoming mail with instructions for its opening, entering, dating, and routing.

6. *Outgoing Mail.* This manual contains the schedule for picking up outgoing mail, sealing, classifying, stamping, and the like; also a brief summary of postal regulations.

7. *How to Pack.* The various products of this company require a number of different methods of packing. This manual illustrates the approved methods. It has two principal uses: (1) to fix responsibility for merchandise damaged in shipment; and (2) to train new employees. The company relieves packers of responsibility for damage to goods packed in the approved manner.

8. *Order-Department Procedure.* One of the principal purposes of this manual is to get orders through promptly. It outlines the procedure in handling orders, and gives a general schedule for completion of all steps.

9. *Accounting-Department Manual.* Outlines the system of accounting, tracing a number of typical transactions through the books and giving sample entries; also outlines the duties of the cashier.

10. *Sales Manual.* This manual has two distinct parts. The first provides the salesman with all necessary information about company policies and routine sales procedures, such as distribution of sales promotional material, obtaining credit information, calculation of probable delivery date, and the like. The second part of the manual tells him in detail how to sell the product.

**How to prepare a manual.** Many different methods are used in preparing manuals for office employees. A method very frequently followed when starting the preparation of a manual is to gather together copies of booklets or individual memoranda, which have previously been issued, containing instructions to particular departments or employees. These may indicate a starting point, at least, for an outline of present practice. The next step is to study in detail the work of each department as it is now being conducted and

to outline the present practices in writing. Following this, changes should be considered carefully and, if they are approved, incorporated in the new manual of instructions. After the work of a single department has been studied and written up in this way, the preliminary draft is submitted to the department head for consideration, possible changes, and final approval. The revised draft is then prepared in its final form. Before it is distributed an adequate index should be prepared, so as to make the manual most conveniently usable.

In an office of moderate size it may be most economical to have only one copy of the manual for each department and to have this kept by the department head or his assistant for use by the subordinates if the need arises. Physical factors also must be considered in preparing the manual. If only a few copies are needed, typed sheets may suffice. If a larger number is required, they may be duplicated or printed. In any case, experience shows that, with the exception of the history and policy manual, and possibly the office rule book, the best results will be secured by preparing the manual in loose-leaf form so that changes may be made easily by substituting one page for another.

**Manual-preparation methods used by a bank.** A direct application of the foregoing general principles regarding the preparation of manuals is to be found in the way in which a large banking institution in New York approached the problem.<sup>3</sup> Figure 115 illustrates the plan in full.

When the manuals program was begun each coördinator—employees designated to act as points of contact between their respective departments and the committee—was asked to give to the general guiding-methods committee detailed information about the work of every department in his activity. It was suggested that those actually engaged in the various activities might be the best ones to prepare the information. As the first

<sup>3</sup> Baechtold, Elsie L., "Preparation and Use of Organization Charts and Manuals of Procedure," *Handbook of Business Administration*, edited by Donald, W. J., published for the American Management Association by McGraw-Hill Book Company, Inc., New York, 1931.

# INFORMATION AND DIRECTIONS CONCERNING ACTIVITIES OF THE COMPANY

Handbook  
of  
Information  
for  
Staff

Rules  
and  
Regulations  
for  
Staff  
Office

1. To contain
  - a. Brief sketch of pur: Company.
  - b. Important directions.
  - c. Reference to general and regu- lations.
  - d. Brief history of the Company.
  - e. Various charts.
2. To be distributed
  - a. To all PRESENT officers and employees.
  - b. To all NEW employees.
3. To be compiled by the Guiding Methods Com- mittee and distributed from the President's office.

## Rules and Regulations

1. To contain
  - a. The entire Company.
  - b. Rules and regulations applicable to the Office distributing the booklet.
2. To be distributed
  - a. To all PRESENT members of the Office concerned.
  - b. To all NEW employees entering that Office.
3. To be compiled by the Personnel Department of the Office and to be distributed in co- operation with the entire Personnel Depart- ment of the Company.

## Summary of Activities

General Summary  
of  
Irving Bank and Trust  
Company  
Activities  
of  
Each Office

1. To contain a brief SUMMARY of
  - a. Each department in each Division.
  - b. How the divisions are coordinated into the office as a whole and to service to customers.
  - c. How the General Coordinating Office functions, proprietary matters.
  - d. How the offices fit into the Company as a whole.
2. To be distributed
  - a. To all PRESENT officers and employees.
  - b. To all NEW employees.
3. To be compiled by the Training Section of the Central Personnel Department of the General Coordinating Office from the DETAILED MANUALS OF PROCEDURE which will be compiled by the Coordinators of each functional activity.
4. Perhaps two or three brief lectures on this should be held in each office.
5. Perhaps an examination on this—and answers to be given to each one. ????

## Manuals of Procedure

DEPOSIT DIVISION MANUAL	CREDIT- LOAN DIVISION MANUAL	FOREIGN EX- CHANGE DIVISION MANUAL	INVEST- MENT SERVICE DIVISION MANUAL	TRUST DIVISION MANUAL	BUSINESS EXTEN- SION DIVISION MANUAL	INTERIOR SERVICE DIVISION MANUAL
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OFFICE  
MANUAL

contain  
A detailed description of the work of every department and unit within the divi-  
In the case of the manual for the General Coordinating Office, to give a comp-  
office and their relation to the parallel activities in the Banking Office.

1. To contain
  - a. Heads of divisions (Manual covering a activity only).
  - b. Any employees who wish to study them at least one circulating set for each office for the use of interested employees.)
2. To be compiled by the Coordinators of the va as activities.

## Manuals of Official Policies

DEPOSIT DIVISION MANUAL OF OFFICIAL POLICIES	CREDIT- LOAN DIVISION MANUAL OF OFFICIAL POLICIES	FOREIGN EX- CHANGE DIVISION MANUAL OF OFFICIAL POLICIES	INVEST- MENT SERVICE DIVISION MANUAL OF OFFICIAL POLICIES	TRUST DIVISION MANUAL OF OFFICIAL POLICIES	BUSINESS EXTEN- SION DIVISION MANUAL OF OFFICIAL POLICIES	INTERIOR SERVICE DIVISION MANUAL OF OFFICIAL POLICIES
-------------------------------------------------------------	---------------------------------------------------------------------	------------------------------------------------------------------------------	--------------------------------------------------------------------------------	-----------------------------------------------------------	--------------------------------------------------------------------------------	-------------------------------------------------------------------------

MANUAL  
OF  
OFFICIAL  
POLICIES

1. To contain
  - a. CONFIDENTIAL information relating to the activity concerned.
  - b. DECISIONS of the Company regarding the carrying out of certain activities.
2. To be distributed to
  - a. Only those officers and others who would have need of them in their work.
3. To be compiled by the Coordinators of the various activities.

## Official Notices

1. Each officer and department head could be provided with a BINDER in which to keep Official Notices, i.e. notices relative to changes in operation, personnel, etc. and such other notices as are sent out from time to time by the President for the purpose of keeping officers notified of Company developments.
2. These OFFICIAL NOTICES would be CONFIDENTIAL and only for the use of the

would not becor

Fig. 115.—A Comprehensive Plan for Publications Describing the Activities of a Bank.

step, therefore, each coördinator discussed with the department heads what was wanted, and requested them to have members of their staffs prepare the desired material.

Many of those who took part in this work had never attempted to put into writing their knowledge of the work they were doing. Naturally, it took considerable time, thought, and encouragement to get the material together this way. If the committee or some one person had prepared the information and had given it to those engaged in the various activities to use, there probably would have been little interest displayed in it and practically no discussion of it. But when those doing the work wrote down their own descriptions, they found much to discuss, much to check up, and they began to question some of their own methods of handling their work. Those who write also learn, and by learning they improve themselves and help to improve the methods they use.

The coördinators receive the material from the departments and review it carefully. It sometimes needs much working over in order to have it describe the work as desired. When a coördinator feels that the manual which he is reviewing has been sufficiently completed, he sends it on to the editor to organize into the approved arrangement. The material as prepared in the departments is usually in narrative form. No request for any particular arrangement of the material was made in the beginning, because it seemed better not to have too many directions for those preparing the data. Facts about the work were the essentials.

### Editing the material.

As the information is prepared by a number of people, it reaches the editor with many types of phraseology and in a variety of forms. The editor goes over the material carefully and prepares an outline of the major points. When it is completed, the details of the points covered are built into the framework, and note is made of irregularities found in the text submitted. This simple form of outline sometimes brings out many irregularities, such as incompleteness of description or illogical sequence of operation. To the revised text are added summary pages and charts of the activities.

The material in this new form is then returned to the coördinator for further review. Sometimes the material passes back and forth a number of times between coördinator and editor before final approval. When it is finally approved, a copy is

forwarded to the president, who reviews all of the manuals. Upon the president's approval the manuals are prepared for the printer.

In the twenty-five to thirty departments of the seven functional activities of the company there are from two hundred to five hundred persons who have something to do with the preparation of the material. All material is correlated, however, by the same editor for the obvious purpose of securing uniformity of style and arrangement.

### The first edition.

This is set up in a simple, inexpensive manner because it is soon to be replaced by the second edition. A photographic reproducing method is used for the text, which is bound in flexible loose-leaf covers.

A sufficient number of copies are prepared to provide one for every officer in the company and for every member of the staff in the activities covered by the manual. A few additional copies are made for the library and for reserve. This means that there are from 300 to 1,000 copies prepared for each activity.

### Distribution and check-up plan.

This plan makes sure that every person who is entitled to a copy of the manual will receive one and will review it. When the manuals are received from the printer, the coördinators have the responsibility of distributing them. The plan of distribution consists of three steps:

First, a letter from the president is prepared to accompany manuals sent to all officers. This letter states briefly the reasons for the manuals and asks each officer to review his copy and send to the president, by a certain date, any comments which he may have to make on the work. Letters and manuals are sent to all officers simultaneously.

Second, after the officers have reviewed the manuals, copies are sent to every member of the activity in every office with a letter, and a review form for the recipient to fill out and return. This form contains four questions:

1. What are the differences between the methods you use and the methods described in the manual? State variations.
2. What operations carried on in your department are omitted from the manuals? Describe fully.
3. What operations described in the manual are omitted in your department? State page and subject heading.

4. What methods used in your department are, in your opinion, better than those described in the manual? Outline your methods in detail and give reasons for your opinion.

After every person working in the activity in every office of the company has thus had an opportunity to answer these questions, the result is a rather comprehensive report on the variations in the practices as followed in the different offices; and a valuable collection of data to use for the second edition of each manual.

### The second edition.

In preparing this edition the comments and criticisms received from the officers and members of the staff are taken into consideration. As a result, the second edition represents a composite of all of the best practices being followed in all of the offices, and will aid in bringing about more uniform procedure throughout the company.

### Revisions.

Manuals will be revised as it is found necessary and desirable. This may be about once each year. Thus the process will be continuous. One of the regular duties of the coördinator of each function is continual research for improvement of methods. This is obviously necessary in order to maintain steady improvement in the company's methods. As improvements develop, the manuals serve as a means for putting the improved methods into actual practice.

### Results of this method of preparation.

Some interesting results have been secured by having the people doing the work prepare their own directions. Among them are:

1. Employees take pride in the fact that they had a part in the preparation and development of the manuals.

2. Employees gain a broader viewpoint regarding all of the company's activities.

3. Above all, this method of preparation provides a means by which (a) to follow up and revise methods continuously, (b) to keep all members of the company advised periodically of changes in methods, and (c) to afford every one in the company a ready opportunity to submit suggestions regarding procedure.



providing the perspective required for sound judgments, and they are easily and quickly understood. In some companies large diagrams are made for posting on bulletin boards or other strategic places; other firms do the same and in addition furnish miniatures to all individuals, with their written instructions.

**Content of a typical office manual.** Since the primary purpose of a manual is to give specific information regarding company policies, rules, and regulations, the detailed content of the manual of one concern naturally will be somewhat different from that issued by another organization. The purpose of the following paragraphs, therefore, is merely to indicate in outline form the kind of data usually included in a general office manual.

*Introduction.* A typical foreword is this:

This manual is issued to familiarize you with the rules and regulations of the company and to give you a clear insight into the policies of the company in all its relations with you.

Should there be anything in connection with your work or the company's policies that you do not clearly understand, do not hesitate to ask your department head; he will be very glad to see that you receive the desired information.

You are expected to read this manual carefully and to preserve it for reference when occasion demands.

*Employment.* The official responsible for hiring, transferring, dismissing; rules regarding resignations or notice; recommending friends for jobs.

*Attendance.* Daily hours; holidays; absence, with or without leave, how paid for or penalized; lateness and promptness, how penalized or rewarded; overtime rules; vacations.

*Promotion.* Methods of salary increases, advancement, transfers; prizes or other reward methods for stimulating suggestions.

*Correspondence.* Rules regarding the distribution and collection of mail.

*Factory.* Details regarding the product, its manufacture, selling points, method of shipment, and so on.

*Customers.* Rules regarding acknowledgment of orders, handling complaints, samples of form letters illustrating relations between house and customer.

*Business etiquette.* Rules and suggestions regarding deport-



ment, dress, talking, receiving visitors, telephone calls, smoking, personal mail, debts, neatness about desk and person, what is confidential about jobs, gifts, and so on.

*Facilities and equipment.* Hours and rules regarding use of lunch room, rest room, library, and lockers. First aid and safety equipment available. Location of various departments. Use of machines. How to requisition supplies.

*Education and welfare.* Whatever is available in the way of schools or courses on the premises or in the neighborhood that may interest the employee. Prize and bonus plans; profit-sharing or pension system, clubs, and so forth.

**A mailing-department manual.** The following abstract from the office manual of the Graton and Knight Manufacturing Company, dealing with the work of the mailing department, illustrates a departmental procedure manual.

*Mail room.* A delivery of the greater part of the incoming mail is made to the department heads at 8:00 A.M., the balance of the first morning mail being delivered at 8:30. Other deliveries are made at 12:00 M. and at 3:00 P.M.

Collections of outgoing mail are made as follows: 10:30 A.M.; 1:30 P.M.; 3:00 P.M.; 4:30 P.M.; 4:40 P.M.; 4:50 P.M.; 5:00 P.M.; 5:10 P.M. No collections will be made after 5:10 except by a special request to the mail room by the person who desires to get mail in after this time. The morning and noon collections are made to enable the mail to catch certain through trains to distant points. Any mail for which especially rapid delivery is desired should be in the mail baskets well before collection time.

Interdepartmental mail is collected hourly on the following schedule: A.M.—7:45, 8:45, 9:45, 10:45; P.M.—12:45, 1:45, 2:45, 3:45. All interdepartmental mail should be delivered within a half-hour after the time of collection. Employees are requested to use this mail service for communications whenever possible, in order to save time, and also to prevent confusion throughout the office, which is a necessary result of much personal running of errands.

Where quick delivery of some paper is necessary at times other than those of the regular mail collections, office boys are available upon request to the mail-room head. It is desired, however, that the use of the office boys be kept at a minimum, and that they be called upon only for errands of an emergency nature.

Owing to the fact that our receiving departments are instructed to open all incoming parcel-post and other packages for pur-

poses of recording receipts, it is suggested that all personal mail, etc., should be directed to home address to avoid confusion and possible embarrassment.

**A manual for employees operating the telephone switchboard.** The following indicates the type of standard instructions that may be issued in connection with the operation of the telephone switchboard. Note the tone used and the exactness of the instructions, as well as the emphasis placed on the importance of the work<sup>4</sup>:

*Your position is important.* In your position as telephone operator you represent this company. Its reputation is directly affected by everything you do and say at the switchboard. It is because your position is such an important one that we have prepared the following instructions and suggestions for your use.

*Courtesy the first essential.* Courtesy is more than merely the absence of rudeness; it involves a cheerful willingness to do whatever is required, and thoughtfulness for others at all times.

*Watch your voice.* A person's voice reflects his mood so sensitively that the only way you can be certain that your voice never betrays anger, impatience, or indifference is to free yourself of those emotions as far as possible while on duty. To be able to do this successfully, you must realize that people are not talking to you personally, but merely to you as a representative of the company. At times they will doubtless be inconsiderate and unreasonable. A good operator, however, keeps her head at all times; and her voice proves it.

*Avoid slang.* The company is judged also by the words you use, and your habits of speech. Avoid slang, and such expressions as, "Uh-huh," "Yop," "Yeah," and the like. Study carefully the list of standard phrases.

*Accuracy the second essential.* Accuracy in the physical operation of the switchboard comes principally from keeping your mind always on what you are doing. Do not carry on personal conversations at the board; and discourage "visiting" by others. When plugging in, see that the plug goes directly into the jack. If it strikes the jack, the ears of the persons on the line will be jarred very disagreeably.

*Talk into the transmitter.* Adjust the transmitter so that it will be directly in front of, and not more than one-half inch away from, your lips. Talk directly into it. Speak as clearly

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<sup>4</sup> Butler and Johnson, *op. cit.*, p. 169.

and distinctly as possible; naturally you cannot do this if chewing candy or gum.

*Speed the third essential.* Answer all signals promptly. If several appear at once, answer them in this order:

1. Recalls
2. Incoming trunk signals
3. Extension signal
4. Disconnect signal

*Answering and repeating calls.* Answer calls from extensions with "Yes," and a rising inflection, as if a question. Whenever an extension or individual is asked for, repeat the extension number.

**Instructions for individual employees.** The value and use of manuals are not limited to their original purpose of helping to establish correct practice. The analysis it makes of a job, and the detailed written description that it provides, enables the employment department to tell applicants exactly what they will be required to do. At the same time, manuals serve as a basis for specifying the personal and physical qualifications required to fill a position successfully. The following is reproduced from the file kept in one company's employment office<sup>5</sup>:

*Occupation—*Order Verifier

*Job Number—*8

*Duties—*

1. Compare illegible names on the order with envelopes or letter.
2. Do the same with address, and:
  - a. Check doubtful streets with street guide.
  - b. Check doubtful P.O.'s with postal guide.
3. Write label.
4. See if information is exact:
  - a. Verify doubtful numbers with catalogue.
  - b. Verify sizes and colors with those stocked.
5. See if information is complete:

Note: We select colors and finishes if not stated, but not sizes.

<sup>5</sup> Butler and Johnson, *op. cit.*, pp. 178-179.

6. Consult out-of-stock list.
7. If we cannot fill items, check with blue pencil in space showing why not, and route to correspondence department.
8. Check prices and extensions of O.K. orders.
9. Check change in address, and route to stencil department.
10. Check carriage charges and totals with amount enclosed.
11. Blue-pencil errors in 7.
12. Attach routing slip routing order blank to all departments included.
13. Attach label.
14. Refer to supervisor any proposed departure from practice.
15. Stamp time out, and place in outgoing mail.

**An accounting-department manual.** Manuals are widely used by accounting departments, particularly by large organizations with many branch offices. The following extracts from the code of procedure issued by the Continental Can Company, Inc., in connection with the Federal Social Security Act and the various state unemployment insurance laws are an excellent illustration of the practical utility of such manuals.<sup>6</sup>

The Chief Clerk at each location will be responsible for the compilation of the necessary information to complete the forms which will be required by the Federal and State governments.

Such completed forms as are designated under Division A-3, (C), Reporting and Forms, will be forwarded to the controller.

The controller will delegate the work of record keeping and reporting at the head office.

*Accounting.*

The tax rate with respect to Federal Unemployment Insurance is based on the entire pay roll and is as follows:

- 1 per cent for the calendar year 1936.
- 2 per cent for the calendar year 1937.
- 3 per cent for the calendar year 1938 and thereafter.

<sup>6</sup> *The Controller*, July, 1936. The Controllers Institute of America.

In a case where the State in which the plant or sales office is located has not enacted a State unemployment insurance law which meets with the Federal requirements, when the gross amount (before any deductions) of a weekly, semi-monthly, or monthly pay roll has been ascertained a computation will be made at the prevailing rate.

The following entry will then be made:

Charge: Acct. No. 833	
Federal Unemployment Insurance Tax	\$.....
Credit: Acct. No. 233	
Reserve for Federal Unemployment Insurance Tax	\$.....

To record the amount of tax accrued in respect of the Federal Unemployment Insurance at the rate of ....% of the entire pay roll for the ..... ended ....., 19...

However, where the state in which the plant or sales office is located has enacted a State unemployment insurance law which meets the Federal requirements, a combination entry will be made as follows:

Charge: Acct. No. 833	
Federal Unemployment Insurance Tax	\$.
Charge: Acct. No.*	
State Unemployment Insurance Tax	
Credit: Acct. No. 233	
Reserve for Federal Unemployment Insurance Tax	
Credit: Acct. No.*	
Reserve for State Unemployment Insurance Tax	

To record the amount of taxes accrued in respect of Federal and State Unemployment Insurance on the payroll for the ..... ended ....., 19...

Pay roll .....		
(Gross amount) .....		\$.....
State Unemployment Insurance Tax .....	%	\$.....
Federal Unemployment Insurance Tax .....	%	\$.....
		\$.....
Less: State Contribution up to 90% of Federal Tax	\$.....	
Net Federal Pay-roll Tax .....		\$.....
Total Federal and State Unemployment Tax Accrual .....		\$.....

\*The provisions and manner of computation with respect to the State unemployment insurance tax will be dealt with separately under the headings of those States which have enacted unemployment insurance legislation.

The Head Office will give the plants an entry monthly covering the tax accrual applicable to the salaries paid by Head Office and which are charged back to the plants.

The entry on the plant books will be:

Charge: Acct. No. 833	
Federal Unemployment Insurance Tax	\$.....
Charge: Acct. No.*	
State Unemployment Insurance Tax	\$.....
Credit: Acct. No. 743	
Head Office	\$.....

At Head Office, the entry in respect of Federal and State unemployment insurance taxes, accrued on salaries paid at Head Office for the account of various offices and plants, will be as follows:

Charge: Acct. No. ....	
(Name of plant)	\$.....
Credit: Acct. No. 233	
Reserve for Federal Unemployment Insurance Tax	\$.....
Credit: Acct. No.*	
Reserve for State Unemployment Insurance Tax	\$.....

To record the Federal and State unemployment insurance taxes accrued by Head Office on plant and office salaries paid by Head Office for the ..... ended ....., 19.., as follows:

Salaries paid by Head Office		\$.....
State Unemployment Insurance Tax .....	%	\$.....
Federal Unemployment Insurance Tax .....	%	\$.....
Less: State Contribution up to 90% of Federal Tax	\$.....	\$.....
Net Federal Pay-roll Tax .....		\$.....
Total Federal and State Unemployment Tax Accrual		\$.....

## CHAPTER XVIII

### *The Preparation and Use of Forms*

Someone once admirably stated the importance attached to the preparation of forms as follows: "That engineer is considered the best designer who develops a machine that produces the best results when used. Should not the designer of forms in an office be judged the same way, that is, by the results obtained when the forms are in use?"

Unfortunately there is a tendency, when a change of system is contemplated, to say, "We can draw up some forms that will take care of this." Forms play too important a part in clerical work for their preparation to be dismissed so quickly. When one considers that the largest part of clerical work consists of entering information on forms and transferring information from one form to another, it is apparent that the preparation, control, and use of forms are indeed important matters.

**Advantages of giving proper attention to forms.** Form preparation and control merit the careful consideration and attention of the office manager for two primary reasons: (1) It has been definitely shown in innumerable cases that money can be saved and wastes reduced when careful attention is given to the work of preparing and using forms. (2) Where such attention is given to forms and their use in business operations, greater standardization and efficiency are secured.

In the matter of money savings, reductions of 20 per cent or more, merely in the cost of the forms themselves, are by no means uncommon. Printing costs alone, including composition, press work, and paper stock, quickly

mount up if the preparation of forms is not given careful consideration. An insurance company, for example, reports that a study of the costs of printing forms revealed one instance in which the printer was using a very expensive stock for a temporary form that was used once and then thrown away. Upon investigation it was found that a stock costing only one-third as much would suffice. A survey of the proper grades of paper to be used for all forms in the organization revealed that about 75 per cent of them could be printed on a good grade of sulphite bond. This careful selection of paper meant a saving of \$4000 in one year on one class of work alone.

While the benefits derived from standardization of procedure and higher clerical production per employee cannot always be measured as readily as can money savings, they are nevertheless of real practical importance. Obviously, for example, the high degree of standardization of branch-office management methods which the Retail Credit Company has established, as described in a previous chapter, would not be possible if all forms used were not standardized. Similarly, the proper arrangement of the data to be entered on a form is an important and essential step towards more efficient clerical production.

In a subsequent section of this chapter a number of additional specific illustrations are given of direct and indirect savings and benefits that have accrued to nationally known companies as the result of the attention that has been given to form preparation, design, and control.

**Procedure for establishing form control.** When an office manager realizes the extent of the waste resulting from poorly designed forms and the advantages to be gained through the adoption of certain standards, he will naturally wish to secure these advantages for his organization. In some cases this is done by a forms committee. The membership of such a committee should consist of those chiefly interested in forms, including the principal department heads, and should have as its secretary the person





## Paper Questionnaire

Paper Users' Standardization Bureau  
AMERICAN WRITING PAPER COMPANY, Inc.  
Holyoke, Massachusetts

### INSTRUCTIONS:—

Please obtain three copies each of all Forms and Stationery used in your department—including all Letterheadings, Forms, Ledger Sheets, Index Cards, etc.

Attach one (1) of these Questionnaires to these three (3) copies, or sets, of each Form, Letterheading, etc.

And answer the following questions.

- No. 1.—Is the Form used outside the department?.....  
a—If so, who does it go to?.....  
b—Does it come back to you?.....  
c—If not, what is done with it when it leaves your department?.....

- No. 2.—Do you write on this Form with—Pen?..

Pencil?..... Typewriter?..

- No. 3.—What is the life of this Form?..

	Years	months	days
a—How long in active use?..			
	Years	months	days
b—How long in the files?....			
	Years	months	

- No. 4.—How much handling is the Form subjected to?

a—How many people make the record?.....  
b—Is it folded when filed?.....  
c—How frequently is it referred to in files?.....

- No. 5.—If a colored Form—

Is the color a factor in your system?..... How?.....

- No. 6.—Does present size fit file or book?.....

- No. 7.—In what quantities do you order this Form?.....

How often during year do you order this Form?.....

This information is for the confidential use of the American Writing Paper Company.

Paper Users' Standardization Bureau  
AMERICAN WRITING PAPER COMPANY, Inc.

Fig. 118.—Paper Questionnaire.

should be destroyed, and official notice should be given of their demise. After all forms have been secured they should be listed and analyzed. Figures 117 and 118 illustrate two convenient methods of summarizing the important points regarding each form.

**Factors to be considered in form design and construction.** The work of designing and constructing forms must include a careful consideration of such factors as the purpose and use of the forms, the kind, size, and quality of paper best suited, and so on. Since each of these matters is important, each will be considered separately.

*Purpose.* Obviously, the purpose of any form is to make the performance of clerical work easier than it would be if a blank sheet of paper were used. Consequently, the kind of information to be entered on the form, how it shall appear on the form, and other similar matters must receive first consideration.

*Use.* The use to be made of the form includes a consideration of such things as how the information to be entered on the form will be received by the person preparing the form; whether the form is to be filled in in pencil, in ink, or on a machine; how long the form is to be kept; the relation of the form in question to other forms.

*Standard form sizes.* The form sizes listed below meet practically any need. Each can be cut, without waste, from standard sizes used by all printers.

*Weight and color.* The weight and color of paper to be used for forms involves four main factors:

1. Longevity. The length of time which the paper must resist deterioration.
2. Treatment. The amount and severity of handling, folding, or exposure to which the paper will be subjected.
3. Impress. The hand or mechanical method of applying the written matter, illustrations, decorations or rulings, and so forth.
4. Appearance. The character, or sense appeal, in the paper itself.

In general, it is advisable to standardize all forms on as small a variety of grades, weights, and colors of paper as is practical. As inexpensive a grade of paper as will give satisfactory service should be used. Because of possible

Size of Form (in Inches)	Cuts Without Waste from Standard Sheet Measuring	Number Obtained from Single Standard-Size Sheet	Number of Single Forms Obtained from One Ream (500 Sheets) of Paper
$2\frac{3}{4} \times 4\frac{1}{2}$	17 x 22	32	16M
$2\frac{3}{4} \times 8\frac{1}{2}$	17 x 22	16	8M
$3\frac{1}{2} \times 4\frac{1}{2}$	17 x 28	32	16M
$3\frac{1}{2} \times 8\frac{1}{2}$	17 x 28	16	8M
$3\frac{1}{2} \times 17$	17 x 28	8	4M
$4\frac{1}{4} \times 5\frac{1}{2}$	17 x 22	16	8M
$4\frac{1}{4} \times 7$	17 x 28	16	8M
$4\frac{1}{4} \times 11$	17 x 22	8	4M
$4\frac{1}{4} \times 14$	17 x 28	8	4M
$4\frac{1}{4} \times 28$	17 x 28	4	2M
$5\frac{1}{2} \times 8\frac{1}{2}$	17 x 22	8	4M
$5\frac{1}{2} \times 17$	17 x 22	4	2M
$7 \times 8\frac{1}{2}$	17 x 28	8	4M
$7 \times 17$	17 x 28	4	2M
$8\frac{1}{2} \times 11$	17 x 22	4	2M
$8\frac{1}{2} \times 14$	17 x 28	4	2M
$8\frac{1}{2} \times 22$	17 x 22	2	1M
$8\frac{1}{2} \times 28$	17 x 28	2	1M
$11 \times 17$	17 x 22	2	1M
$14 \times 17$	17 x 28	2	1M

Bond and ledger papers are usually promptly obtainable in 17 x 22, 17 x 28, 19 x 24, 22 x 34, 28 x 34, 24 x 38.

confusion, and because of the expense, it is well to avoid elaborate color schemes. It is recommended that, if there are more than three copies of a form, they be distinguished by number rather than by color.

*Lines printed or ruled.* It is usually cheaper to print lines than to rule them, especially in large quantities, since

the forms must be run through the press to print the type and the lines can be printed at the same time. If lines are ruled, the forms must be run through the ruling machines in one or more directions and in one or more colors after the type is printed. Practically all the effects gained by lines ruled in colors can be secured by the use of heavier or lighter printed lines, or by double lines. A further disadvantage of ruled forms is that corrections cannot be made easily after the form has been set up. Printers often refuse to show proof of forms containing horizontal and vertical rules, as correction of such forms might necessitate resetting the ruling pens throughout the entire form.

*Type.* Gothic type should be used on all forms. This is a font that is kept by all good printers. It is easily read and looks more businesslike than other fonts. If gothic type is used on all forms, they will be uniform and distinctive. Figure 119 contains samples of gothic type frequently used.

		GOTHIC TYPE FOR FORMS
6 PT. 522	NO. 2	GOTHIC TYPE FOR FORMS
6 PT. 523	NO. 3	GOTHIC TYPE FOR FORMS
6 PT. 524	NO. 4	GOTHIC TYPE FOR FORMS
8 PT. 525	NO. 5	GOTHIC TYPE FOR FORMS
8 PT. 526	NO. 6	GOTHIC TYPE FOR FORMS
10 PT. 520	NO. 7	GOTHIC TYPE FOR FORMS
12 PT. 545	NO. 8	GOTHIC TYPE FOR FORMS

Fig. 119.—Samples of Gothic Type.

Because all lines are of even width, gothic is the only type that blue-prints or photographs satisfactorily.

*Ink.* Black ink should be used for type and for lines.

*Printed on one or both sides.* The printer should be fully informed as to whether the form is to be printed on one side or on both.

A card on which it is intended to carry over from the front to the back should be "tumbled"; that is, the back should be printed so that when the bottom is turned up, the back of the card will be right side up.

*Punched, scored, or perforated.* The printer should be instructed as to the size of holes and distances from centers.

*Quantity wanted.* When a form is printed for the first time, or when an important change is made in an old form, it is not desirable to print more than a relatively small supply, so that, if the need for changes becomes apparent later, it will not be necessary to wait very long for these changes to be made. When the form has proved itself satisfactory, it is desirable to order a larger quantity—enough for six or eight months, but not more. Savings made through printing large quantities are often nullified by having to destroy out-of-date forms.

**Principles of good form design.** The following suggestions will be found helpful as a guide in designing forms.<sup>1</sup> Arrangement, more than any other single factor, will determine the success or failure of a form.

1. Filing or sorting symbols should be conspicuous. The upper right-hand corner usually should be reserved for filing information, filing symbols, reference numbers, identification marks, code symbols, or whatever the information is by which the form is to be sorted or filed. In those cases where it is impossible to use this space, it is necessary to consider the entire handling of the form in deciding on the best part of the form to be used.

2. Provide boxes in which information can be entered. The use of boxes for information is preferable to more lines, for it results in a neater form and is not confusing even when there are a great many items to be filled in. The printed box also limits recording to the box, which is not the case where lines are used. The printed headings in the box should be set in small type and should be placed close to the upper left-hand corner.

3. Arrange the information on the form in the same sequence as it is arranged on the forms to which or from which the information is transcribed.

4. Group information by departments. Errors will be reduced and saving of time will result if all information recorded or used by one department is grouped so that it will be unnecessary to search for it.

<sup>1</sup> Lies, B. Eugenia, "Forms: Their Design and Use," *Handbook of Business Administration*. McGraw-Hill Book Company, Inc., New York, 1931.

5. In designing spacing for handwritten forms, consideration should be given to the type of employee using the form. Clerical workers as a general rule can write on lines spaced four to the inch, or even, at times, five to the inch. For quick entries or for employees not used to clerical work, spacing of three lines to an inch should be used.

6. If forms are to be typewritten, lines are usually unnecessary. When lines are necessary, the horizontal ones should be spaced three to an inch, which is double typewriter spacing. The reason why double spacing is preferable to single spacing is that box titles cannot be printed in the space available when the typewriter is single spaced. Vertical lines should be spaced in multiples of one-tenth inch for typewriters having pica type and one-twelfth inch for those having elite (small) type.

7. When the form is to be made out on duplicating or other kinds of machines, special consideration should be given to the requirements of the individual machine. However, this should not be the only consideration in designing the form. Frequently easy handling and use of the form is sacrificed to supposed mechanical requirements.

8. Definite economies will usually result if the information is confined whenever possible to one side of the form. If it is found necessary to print both sides of a form, an effort should be made to have complete information on each side of the form to eliminate the necessity of turning. If this is not possible, it would be well to consider whether it would be more economical to have two separate forms printed on one side only. However, before deciding, consideration should be given to the following:

a. How the form is used.

b. The cost of printing on two sides of heavy paper as against two separate printings on light weight paper. If two sides are used, the form will get about twice as much use, and in the case of bond paper where transparency is a factor, it may be necessary to substitute ledger for bond.

c. Savings in filing equipment. If both sides of the form are used, less filing equipment will be necessary.

9. It is usually desirable to print instructions for the use of the form on the form itself. These instructions should be clear and concise and should instruct the individual specifically as to how the form is to be used. Where the form routing is complicated, and the people using the form do not come in frequent contact with it, it is desirable to make the instructions more detailed. However, if too many instructions are put on a form, the employee may not read them at all and it may be better to

record complete instructions on separate instruction cards and manuals. Instructions should, as a general rule, be placed on that part of the form where they can be read or consulted easily. Instructions may be made part of the title, printed at the bottom of the form, or in the binding margin. Some concerns number the columns and then print separate detailed instructions, referring to the columns by number.

10. If the form is to be filed, consideration should be given to the type of file to be used, and the following points decided:

a. If a visible file is to be used, determine what information should be visible and whether the form should be visible at the top or at the bottom.

b. If the form is to be filed vertically, determine whether the filing symbol should be conspicuous and whether the paper is of proper weight.

c. If the form is to be bound in a loose-leaf binder, be sure that sufficient binding margin is allowed. Binding margins vary from one-half inch for ring binders to two and one-half inches for some types of post binders.

**Other considerations in designing forms.** In addition to the factors just mentioned, other matters must be considered in designing forms. The name of the form must be selected carefully. In this connection it is i  
to make the name of the form as definite  
possible. For example, instead of naming a form used for cost accounting purposes merely "Cost Record," it should be called, "Cost of Raw Material Record," or "Direct Labor Cost Record."

The form number should be placed at the lower or upper left-hand corner of the form, together with the quantity printed and the date of the printing. Forms are  
bered either numerically or on a combination alphabetical-numerical plan. In the latter case letters are used to indicate the name of the department, while the numbers indicate the particular form in that department. For example, "S" may refer to the sales department; thus S17 would mean Form 17 used by the sales department. The roman numerical M prefaced by the number of thousand forms printed usually is used to indicate the quantity



printed. The month of the year expressed in number form should also be indicated. If these symbols are used, the number S21-9M-8-36 would mean that the particular form was a sales department record, No. 21, that 9000 had been printed, and that they had been printed in August, 1936.

**Private printing plants versus purchased printing.** In a small organization the question as to whether the company should print its own forms or have them done by an outside printer seldom arises, since it is obvious that the former method would be impractical from the expense standpoint alone. Many such concerns, however, as well as larger organizations, are making increasing use of reproduction methods other than printing, such as the mimeograph, multigraph, and ditto processes. In a number of cases the results secured are equally satisfactory from the point of view of practical utility, while the cost is substantially lower.

In the case of large companies, it may seem that the establishment of a company printing plant would be advantageous, both from the standpoint of cost and service. While there is little doubt that, because of direct company control, better service can be obtained in such cases, the amount of money actually saved is often not so much as one might expect. Direct salaries for the printing-department employees mount to unexpected figures, and the investment in printing-plant equipment, as well as the cost of maintenance and repairs, is relatively high. Unless the company is very large, a considerable amount of time when the equipment is idle must be charged against the job turned out by the company-owned printing plant. Few firms have enough work to keep the presses running continually. Moreover, it is difficult to secure and hold experienced workers in the small shop where the volume of work varies considerably. Furthermore, a company printing shop managed by someone who is not an expert printer is at a great disadvantage when the quality and cost of its

work are compared with that done by an outsider who has been in the business for many years.

The Metropolitan Life Insurance Company, however, is a large clerical organization that maintains its own printing plant, employing 500 people, and the Art Metal Construction Company and the RCA Victor Company maintain their own printing departments.

### **Form-control procedure of the RCA Victor Company, Inc.<sup>2</sup>**

In this company all office forms are stocked in the main office building, except some that are used by special units, which no other divisions handle. These units carry such forms in the outlying buildings and are responsible for their own minimum stocks. The approval of all printing is centralized in the office service division, except in the case of certain factory forms which are under the control of the general superintendent's office.

Authority for approval of all new office forms or the re-ordering of existing forms is centralized in the office-service division. Requisitions for new printing that originate in division or section offices are forwarded to the office-service division manager, where folders are kept containing samples of each form with a write-up or description of the form. A form number is assigned when the printing order is issued for the newly approved form. New forms are carefully reviewed, particularly in regard to purpose, clerical effort, and arrangement.

Re-ordering of existing forms is started by the stock clerk, who delivers to the office-service division office a sample of the form, with a pencil notation of the present minimum and authorized maximum stock. A form letter is typed for delivery to the division that uses the form, together with a typed requisition for the maximum quantity to be ordered. The unsigned letter, with requisition and sample form, is delivered to the office-service division manager for review prior to his signing the letter. Desired changes are noted, and the data are forwarded to the division where the form is used. The division manager reviews the papers and places his O.K. on the requisition previously prepared for him. This gives a double check

<sup>2</sup> Wythes, Robert W., "Control of Printed Forms," *Annual Proceedings*, pp. 119-121. National Office Management Association, 1930.

on all desired changes and the maximum to be ordered. A duplicate copy of the requisition is held in the office-service division, so that if the original with letter and samples is not returned promptly, a follow-up can be made by telephone to prevent the stock from decreasing too far below the minimum before a printing order is issued.

The returned approval requisition is initialled by the office-service division manager and forwarded to the production dispatching section, where the printing order is issued. A copy of the printing order is returned to the office-service division and filed in the form folder. Each day samples of all forms printed are sent to the office-service division for filing in the folders.

### **Determination of purpose and necessity for new forms.**

New forms may originate in any of the divisions or sections, or the office-service division may be asked to draw up a form for stated purposes. The purpose of the form—if it is not to improve a form now in use, to make a combination of two or more forms, or to eliminate a form—is explained by a filled-in "Description of Form" blank. The information obtained by this questionnaire is enlightening, and generally provides sufficient detail to assist in approving the new form, or to serve as a basis for discussion with the division manager if form is thought to be unnecessary. Many cases of forms similar in purposes have been discovered.

### **Storing, issuing, and re-ordering forms.**

Seven hundred and ninety-three different printed forms or papers and two hundred and sixty-five items of supplies and stationery are carried in the office stock. These are stored, issued and re-ordered by two young men, with the part-time assistance of a female typist. The printing plant delivers all printed forms, and the receiving division forwards all purchased forms or stationery, together with a delivery ticket, to the stock clerks, who place the merchandise on the shelves and enter slip totals on stock cards.

Forms are issued to the divisions or sections when they present a properly signed printed-form requisition. The deliveries are posted to stock cards. Each stock card shows a minimum quantity to be carried, and in addition the physical stock has a red tag or card inserted at the minimum quantity. When the stock is reduced to the minimum, the stock clerk marks the present stock and maximum stock on a sample of the form and delivers it to the typist, who prepares a requisition and a form

letter to be signed by the office-service division manager and the division manager using the form. The requisition with two approvals, as previously described, is then sent to the dispatching section to have a printing order issued, or direct to the purchasing division if secured from an outside vendor. Requisitions received in the morning are delivered by 2:30 P.M. the same day and requisitions received after 1:00 P.M. are delivered by 10:00 A.M. the following day.

### Elimination of obsolete forms.

As soon as a form is discovered by stock clerks or by other persons to be inactive or obsolete, a questionnaire is prepared in duplicate and referred, with a sample, to the office-service division manager, who sends the original and sample to the division or section that has been using the form. The division manager indicates the disposition of the electrotypes and present stock. The stock of forms is then sent to the printing plant, where forms are cut up for scrap pads, sold as scrap paper, or used for interleaving; and the electros are destroyed or the type is distributed.

### Charges for forms.

Complete cost record is kept of forms printed by the printing plant. Forms and stationery purchased outside are charged direct from the completed printing order or vendor's invoice. The approval by the division manager on the requisition when the sample form was forwarded for his review is accepted as his authority to charge the entire quantity to his division. All general forms are charged to the office-service division.

A practical program of form and stationery cost reduction. The Westinghouse Electric and Manufacturing Company has been very successful in reducing the cost of producing printed material. The plan followed by the company is based on the scientific elimination of waste in both form and advertising printing. Some of the more important savings which have resulted from this program are <sup>3</sup>:

Fifteen letterheads reduced 50.6 per cent in cost—a total annual saving of \$861.86.

<sup>3</sup> *System and Management Methods*, July, 1932.

Three internal-correspondence sheets reduced 32 per cent in cost—a total annual saving of \$2169.31.

Nine miscellaneous office forms reduced in cost 57.7 per cent—an annual saving of \$389.08.

Eleven mailing labels reduced in cost 49.7 per cent—a total annual saving of \$524.66.

These representative examples show an average reduction in cost of 38.9 per cent—a total annual saving of \$3944.90. Total annual savings possible on all the forms of the parent company alone are estimated to be more than \$130,000. All advertising dummies (eighty-six folders and twenty-two booklets) are cut without waste from only three basic sheet sizes of book paper, which replaced 44 sheet sizes used in 1932. Estimated savings on advertising literature with the plan in full force will amount to 25 to 40 per cent. The savings are not the result of the elimination of needed items or of the reduction of quantities or qualities of printed material, but rather the direct result of the application of standard production methods. It is said that the same methods can be applied in any other company with comparable results.

### Basic principles of the procedure.

Cost-reduction in form printing is accomplished through physical standardization (size, shape, and so on), stationery control, and the use of standard production methods. The latter accounts for the greatest portion of the savings. Standard production methods eliminate the basic inefficiencies of the printing industry by making use of mass-production methods.

Successful use of standard methods in form printing depends upon a system of control over the ordering of the forms after they have been given a basic identity through physical standardization. Mass production of forms can be attained only by ordering a sufficient number of different forms at a given time to permit them to be produced on the press in combination with one another. However, a form cannot be ordered unnecessarily merely to complete a mass-production run. Nor can an order for a needed form be held up pending the arrival of enough other orders to complete the run. All forms must be maintained in sufficient quantities to meet current demands. A proper balance of stocks is the keystone of ordering under the standard method. Proper quantities are always maintained, and group orders prevail rather than single form orders. Nevertheless, the

adoption of such a plan does not entail any increase in the inventory of forms.

The preliminary standardization of forms provides a common denominator that takes into account all the technical factors of mechanical production, so that they will lend themselves physically to mass production. Needless to say, this requires a specialized knowledge of printing as a manufacturing process.

### Relation of forms to system.

It is impossible, of course, to carry on a study of forms without at the same time giving adequate attention to the systems which they represent. While a study of systems is not necessarily a part of the standardization process, each is so directly related to the other that both may well be carried on simultaneously.

In the Westinghouse organization a very comprehensive study of systems was undertaken in connection with form standardization. Many direct results have been obtained in savings of time and money, but these results are not considered a part of the program on printing, and the savings are not included in those previously mentioned.

### How the cost of advertising printing was reduced.

The production of advertising printing presents a different problem from that of forms because there is not the repetitive ordering of a fixed item as in the case of forms. Rather, each booklet or folder is designed and produced as a single item. In most cases there are no reprints, or at most one or two. Thus the solution in this case must deal with each piece as a single item. However, as in the case of forms, the plan followed is based on the fact that advertising printing is a manufacturing process.

The first step was a comprehensive analysis of printing, both as a manufacturing process and as sales literature. Efficient factors were segregated from inefficient factors in the manufacturing process, and the efficient units were translated into the sizes and kinds of booklets and folders most used by advertisers. The result was a set of dummies for booklets and folders that completely satisfied all the factors of efficiency and economy in production and raw materials, and that also satisfied the advertising needs of the company. Thus those who prepared the advertising literature were offered standards that imposed no

limitations upon them from a functional standpoint, but that anticipated all manufacturing problems, which the designer could not hope to know, and which in the past have caused most of the waste. Printers and paper manufacturers were brought into full accord with the program, and the result was that advertising literature was planned, bought, and produced with a maximum of efficiency and economy.

**A form study made by a publishing company.** The study of the stationery and office-supply situation made by this company had two purposes. In the first place, it was necessary, from the standpoint of physical capacity and space available in the stores department, to clean out as many obsolete forms as possible. Second, it was desired to consolidate, as far as possible, a number of existing forms that varied only in minor detail, and to standardize wherever possible on such things as size, grade, and weight of paper, arrangement of information on the form, and so on.

The first step was the study of all forms on hand with a view to destroying all those that appeared, from records of past usage, to be no longer necessary. To this end the storekeeper was requested to furnish from his stock a sample copy of every form and piece of stationery on hand—some 5000 altogether. These were put into folders arranged by departments. A transcript or summary of the stock records was prepared for each form, which contained the following information: description of form, form number, date originally ordered, quantity ordered, cost per unit, total cost, ordered by, quantity used, date last used, quantity on hand, value, and location in the store room. An assistant in the office-service department, who was assigned to carry through the entire study, next went over each folder with its corresponding sheet with a view to seeing what present forms could be combined with similar ones used by other departments, and what forms appeared to be obsolete. At this point consideration was also given to other aspects of the standardization program, particularly the size of the form, the grade of stock to be used, and the arrangement of the printing on the form itself.

Following this preliminary study, each folder was taken to the department head, and the desirability of considering as obsolete certain forms, which had not been drawn out of stock for some time, was given careful consideration. Diplomacy and firmness were sometimes necessary in order to secure the desired action. On the one hand, it was essential that no forms obviously out of date be kept merely because the department head did not wish to charge their cost against his department. On the other hand, arbitrary methods were not wanted, as it was desired to carry through the entire task on a completely coöperative basis.

After all the forms in each department had been studied in this way, the storekeeper prepared requisitions drawing out of stock all forms which it had been agreed were obsolete. The requisitions were sent to the department heads for their signatures and subsequently passed to the accounting department, which charged the cost of the obsolete forms directly to the department that had originally ordered them. The forms were then sold for their waste or scrap value, or in cases where the back of the form was blank and could be cut up and used for scratch paper, this was done. Some \$1800 worth of obsolete forms was thus destroyed, with the result that instead of overcrowding in the store room and consequent pressure to find additional space for incoming material, many bins were only comfortably filled, and some were left entirely empty.

The next step was a study of the possibilities of standardizing general company forms. For example, it was found that there were some fifteen different kinds of individual memorandum slips, each of which had been designed by a particular executive or department head. The memoranda varied in size from a small 4 by 6 sheet printed on first-grade bond paper to a 7 by 10 sheet printed on a much cheaper grade of paper. The character and size of the type varied in almost every case, and there were practically as many colors as there were types of slips. After a study of the situation, individual preferences were entirely elimi-



nated and a standard company form, with the simple heading "To-----, From-----, Date-----," was adopted, together with a standard size and grade of paper. In the case of general inter-office memorandum paper it had been the practice to print one line at the top of the sheet in red ink, thus making it necessary to run the forms through the presses twice. The two-color process was eliminated, and the information which it was desired to emphasize was set in somewhat larger type.

A study of the various letterheads used by different departments revealed the existence of over 250 styles and kinds. Some men had made a practice of having their names printed in large type at the top of the sheet; others had prepared special departmental stationery; still others had taken the general company letterhead and printed supplementary information on it. Standard company and departmental stationery, in two grades only, was adopted.

Another item in which standardization proved entirely practical and very economical was labels to be pasted or attached to outgoing packages. Here it was found that, as with the individual executive memorandum sheets, almost every department had its own individual style and method. Some gave the address of the company and some did not. Some labels were gummed on the reverse side, and some were intended to be pasted on with mucilage. One standard form was adopted.

**Control of orders for new forms.** The next step was to establish a plan whereby the changes decided upon could be given practical effect when orders for new forms and stationery were placed. Three controls were established for this purpose. First, a ruling was issued that all orders for form printing, including the reprinting of old forms, must be approved by the assistant purchasing agent. It is interesting to note that while the review of all such orders took no more than fifteen or twenty minutes each day, on the very first day in which the ruling went into effect a suggestion made by the assistant purchasing agent, calling

for the slight alteration of a form, resulted in a direct saving of \$150 in printing production cost alone. Second, specifications, by form number, as to sizes and styles, grade of paper, and so on, were furnished the storekeeper, and he was made responsible for seeing that all orders conformed to the standard established. Third, the list of authorized signatures was revised and brought up to date. Only department heads and assistant department heads were allowed to sign requisitions. While at first there was some complaint on the part of a few subordinates who felt that their individual prerogatives were being taken away, the adoption of a policy of strict adherence to the ruling, and a few weeks' experience, resulted in the full acceptance of the plan by all concerned.

Securing continuing control of forms previously standardized. A somewhat different method than that just described is used by the Canadian National Railways to secure a continuing control of forms that have already been standardized. This company experimented with several more or less elaborate routines before the simplest and most practical plan was found.<sup>4</sup>

In common with other large organizations, the company has a forms committee, comprised of a representative from each important department, and having as chairman an executive general officer. When a revision or a new form is required, the using department fills in a printed form—authorization blank—and obtains the approval of the officer in charge of the activity, or territory. This officer forwards it to the departmental forms representative at headquarters, who is a member of the forms committee. If he approves, he then sends the form to the chairman of the forms committee for final approval. The authorization is then sent in duplicate to office services, which searches for flaws in the arrangement of the data, and sets up a manufacturing specification for the form. A copy is sent to the purchasing department, which is their notification that requisitions may be

<sup>4</sup>Stapleton, C. U., "Design, Standardization and Control of Forms." *Annual Proceedings*, p. 102. National Office Management Association, 1931.

accepted. Under this procedure there is only one form to be filled in and three important signatures required before approval.

The following questions are asked regarding each form:

1. What form(s), if any, will it replace? (Give numbers and attach samples.)
2. Is proposed form a consolidation of existing forms? (Give numbers and attach samples.)
3. Can existing form be revised to include required information?
4. How was this information previously supplied?
5. Periodicity of form? (Weekly, monthly, etc., or as required.)
6. Number of copies made at each writing?
7. Will it be permanent? (If not, state temporary period.)
8. For pen, pencil or typing?
9. For local or general use?
10. Internal or external use?
11. Give minimum usable size of form and quality of paper. (Paper on which this form is printed supplied unless reason for higher quality justifies.)
12. Is form to be loose, padded or bound, punched, numbered, perforated, interleaved, folded, or gummed? (Book—number of leaves: Punched—exact size and position of holes: Numbered—consecutively, duplicate, etc.: Interleaved—number of sheets: Folded—number of folds: Gummed—position and extent of gumming: )
13. Essential reason for any such special operation.
14. State fully any other reasons for the establishment or the revision of this form.
15. Value of stock to be scrapped?
16. Value of plates to be scrapped?
17. Will all present stock be used? (On hand and on order.)
18. Initial supply required?
19. Subsequent annual consumption?

There is a note at the top of this questionnaire stating that the standards office should be notified immediately any change is contemplated, and that unless all questions are answered fully, delay and correspondence will result. At the bottom of the form routing instructions are given; the necessity for attaching samples is stressed; the suggestion is offered that forms of very small consumption be duplicated rather than printed; and the statement is made that authorization is unnecessary if revision will reduce the cost of manufacture.

## CHAPTER XIX

### *Reports Used by the Office Manager*

In previous chapters several references have been made to the fact that one of the results of the increasing size of business organizations has been to make close contact between executives and subordinates less and less possible. As a result, there is necessarily a greater dependence than ever upon records and reports as means of securing information and exercising control over operations.

Every executive has occasions to prepare and to receive a considerable number of reports. This is particularly true of the office manager, not only because he is in charge of the work of an important department and consequently must render reports periodically concerning its work, but also because he often has to do with the preparation of reports other than those that pertain to the work of his own department. For these reasons, it is important that the office manager be thoroughly familiar with the principles and practices of report making and writing. It is the purpose of this chapter to state those principles briefly and specifically. In this discussion "reports" are understood to include not only routine reports or records of daily work, such as those prepared by delivery drivers, timekeepers, bookkeepers, and traveling salesmen, but also, and primarily, departmental, company, and administrative reports, both periodical and special.

**Fundamentals of report preparation.** Although different kinds of reports naturally require special treatment, there are certain fundamental principles that should be followed in the preparation of practically all reports.

The first step is to determine the scope or content of the report. At first thought this statement may seem to be unnecessarily elementary and obvious. It may be said, perhaps, that any man who is capable of doing executive or administrative work realizes the value of working out a definite plan of action before commencing any task.

As a practical matter, however, it is not always easy to decide what the content of a report should be. For example: The office manager, confronted with the task of preparing a report on a new layout for the office departments, may feel at first thought that a statement or plan of the present layout, together with the reasons why it is not as good as it should be, and a similar presentation of the proposed new layout, should comprise the essential features of his report. When, however, he starts the actual work of report preparation, related questions begin to arise in his mind. Should the report attempt to forecast the future needs for office space? Or is such a forecast, depending as it does on the anticipated increase in business, and on the general plans and policies of the company for the future, a matter that might better be left to other administrative officials? Should only one plan be presented, or should several possible arrangements be outlined? To what extent should costs be discussed? There is always the danger of intruding on what others may consider their legitimate field of work. Obviously, therefore, careful consideration must be given to the exact content of the report, particularly one of the kind just mentioned.

The second point to be borne in mind in preparing reports is, that the person for whom the report is prepared is usually interested primarily in results and final recommendations rather than details. This statement is not made with a view of disparaging in any way the practice of many competent and successful executives, who carefully analyze and study details in order that they be fully familiar with all the facts in the situation. The report writer must remember, however, that most executives have many

things to think about. Whenever possible, long, involved explanations should be avoided. If statistics or numerous figures must be presented, the use of a graph or a chart will be found helpful.

Clarity, conciseness, accuracy, and logical arrangement and presentation of subject matter are also fundamental to the preparation of good reports. Nothing destroys the value of a report more quickly than vagueness, generalities, lack of precise statements and recommendations, or errors in facts and figures. The report writer should never lose sight of the fact that the primary purpose of all reports is to convey information and to secure action. If the "facts" in the report are incorrect, little reliance can be placed on the conclusions and recommendations. Likewise, a report characterized by an executive as "very interesting" or "well worth thinking about" is more often than not a failure, for the reason that it does not result in some positive action being taken.

**Kinds of reports.** The kinds of reports with which the office manager is concerned may be classified under three headings: (1) periodic departmental reports, (2) administrative or executive reports, and (3) special reports. Each will be considered separately in the order named.

**Periodic departmental reports.** Periodic departmental reports, such as monthly reports of operations, which the executive may require from each department head, are regularly prepared in many offices. Departmental records of performance usually form the basis of such reports. In fact, a summary of the data contained on these records, with an explanation of all unusual items, often comprises the principal substance of such reports.

It is important that the detailed records be kept in such a way as to facilitate their use for report purposes. An illustration from the practice of the sales department of a well-known concern aptly illustrates this point. Each of the 250 traveling salesmen is required to send the sales manager a weekly report of his activities. This weekly

report contains the kind of information usually found in reports of this type, such as the total number of calls made on customers, calls made on prospects, value and volume of sales made, amount of dealer-help material distributed, notations as to the items in the line in which there seems to be a special amount of customer interest, and so on. These reports form the basis for the sales manager's monthly report to the general manager.

Clerks in the sales department summarize the information contained in the individual reports. To facilitate the preparation of the monthly summary, the various columns of the salesman's reports are so arranged that the clerks require a minimum amount of time to transfer the information to their summary sheets. There is no need for a reclassification of the information in a different form from that in which it is received by the sales office. The net result is that the time the clerks spend each month in summarizing this information for the sales manager, which, to a certain extent, is time that must be taken from other work, is cut to the minimum. Coördination of the form of periodic departmental reports with the detailed records upon which they are based, is a step which often results in eliminating much of the burden that frequently accompanies the preparation of such reports.

**Use of the questionnaire method.** One company found it advisable to prepare most of their routine sales reports in what might be termed the "questionnaire form." The various points on which information is desired are listed on a printed sheet, so that the report can be completed merely by inserting figures or brief comments. Sometimes simply a check mark serves the purpose.\* Whenever it is practical, this practice is well worthwhile for several reasons. It saves time in preparing the reports. The salesmen do not raise the objection that it adds excessive red tape to their regular duties. It also insures that the report will include all the necessary data, as nothing can be overlooked. Finally, it is of great help in analyzing the reports, as one

quickly gets accustomed to looking for certain information in a certain place on the form.

### **Type of information usually contained in periodic reports.<sup>1</sup>**

Periodic reports of clerical activities usually indicate the volume, speed, accuracy, and cost of the work, so as to show whether a given quantity of work is handled with a desired degree of accuracy in a reasonable time and with due economy, taking service into consideration. Since each situation is likely to differ from others, specific rules for devising such reports are hard to give. The reports should normally show: (a) the volume handled, and the amount on hand, splitting up the figures of the different kinds of work if they vary in importance or difficulty; (b) the number of errors and the percentage of accuracy; (c) the speed with which the work is being completed, or the number and proportion of cases not being handled on schedule; and (d) the cost of doing the work, considering often only the major items of easily measured costs. These data should be shown for the current period and in comparison with other periods or with a budget or standard, and should be accompanied by brief comments explaining any unusual items.

### **Monthly report for a policy-issue department in a life insurance company.<sup>2</sup>**

Figure 120 illustrates a suggested monthly report for the policy-issue department of a large life insurance company. Comparisons are made with the preceding month on a monthly basis and with the preceding year on a year-to-date basis. If there is normally a wide variation between the various months, comparisons with the same month of the previous year might be substituted for the comparison with the preceding month. A quota, a budget figure, or a standard performance, if worked out for a department, should be shown along with the actual accomplishment; otherwise a figure for the average volume may be given.

Accuracy is reported only insofar as the errors affect persons outside of the department. Errors made and caught within the department are not considered in this report. Sometimes it is

<sup>1</sup> Reprinted by permission from *The Office Supervisor*, by Niles and Niles, published by John Wiley and Sons, Inc.



well to consider in a departmental report the errors made in one division of the department and caught in another, as this will reflect the accuracy of the department as a whole; but such errors should not be grouped with the ones which leave the department, as these are usually of more consequence.

Speed of handling the work is treated in three ways in the report. First, the oldest case in the department is recorded to show whether any cases are taking an excessive time. The causes of the delays may also be shown. The next speed analysis is from the point of view of the applicant. This will be affected by how well the agent filled out the application blank, by how many requests for special information the underwriting department sends out, and by other factors which will be quite outside of the control of the issue department. However, the company will be judged partly by the speed with which it gets its policies into the hands of the applicant. To the head of the issue department this record has less importance than the third analysis, which shows the speed with which the cases are handled in his department, once the complete data are received.

The cost figure includes only clerical salaries, with adjustments for clerical time borrowed from other departments or actually lent to them. The net salary cost per policy issued is taken as a workable measure of efficiency from the point of view of cost. Next to it is shown the average salary per clerk. If this tends upward while the cost per policy issued tends downward, the situation is very satisfactory and indicates good management.

Under "Remarks" is provided space for recording the excess clerical time available to other departments but not used by them. This presupposes an arrangement for shifting. A consistently large figure for time lent or available for lending indicates that a permanent reduction of staff in the department might be desirable, and that the situation should be reviewed.

**Periodic reports of other departments.** Reports similar to the one shown in Figure 120 may be prepared for a wide variety of departments.<sup>3</sup>

The work of the individual department must be considered, and the items recorded should be chosen with the particular situation in mind. The items appropriate for several departments are given in Figure 121.

It should be noticed that more than one measure of cost is

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<sup>3</sup> *Ibid.*

# MONTHLY REPORT ON NEW BUSINESS ISSUED ..... 193

	<i>Year to Date</i>	
	<i>This</i>	<i>Last</i>
	<i>Month</i>	<i>Month</i>
<b>VOLUME</b>	<i>This</i>	<i>Last</i>
New policies mailed during period..	<i>Month</i>	<i>Month</i>
Changes mailed during.....	<i>Year</i>	<i>Year</i>
Approved applications on hand end of period.....		
<b>ACCURACY</b>		
Number of policies returned from field for correction of errors ....		
Errors in records, etc., found by other departments.....		
<b>SPEED OF ISSUE</b>		
Oldest case on hand at close of period .....		
<i>Speed from Applicant's Point of View</i>		
Working Days from Date First Papers Received Until Policy Released		
	<i>Per Cent</i>	<i>Per Cent</i>
	<i>Last</i>	<i>Year to Date</i>
	<i>Month's</i>	<i>This</i>
	<i>Per Cent</i>	<i>Last</i>
<i>Working Days</i>	<i>No. of Cases</i>	<i>Per Cent</i>
Same day.....		
One day.....		
2 days.....		
3 days.....		
4 to 6 days.....		
7 to 9 days.....		
10 to 12 days.....		
13 days or more...		
Total .....		
<i>Speed of Issue in Department</i>		
Working Days from Date Last Papers Received Until Policy Issued		
	<i>This</i>	<i>Year to Date</i>
	<i>Month</i>	<i>This</i>
	<i>Month</i>	<i>Last</i>
Number of policies issued on same working day .....		
Per cent issued on same working day .....		
Number issued with 1 day's wait....		
Per cent issued with 0 or 1 day's wait .....		
<b>Cost</b>		
Total number of clerks in department .....		
Policies issued per clerk.....		
Total salary cost of department....		
Less credit for time lent other departments .....		
Plus charge for time borrowed from other departments.....		
Net salary cost.....		
Net salary cost per policy issued .....		
Average salary per clerk regularly in department.....		

Fig. 120.—A Typical Monthly Control Report.

provided for each of the departments. The purpose is to the cost in relation to the work done by the department and in relation to the work or the income of the company as a whole. If a department which tried to collect overdue accounts by the use of a series of follow-up letters is rated solely upon the cost per letter, the figure may reflect how efficiently it is sending out the letters, but it will not tell the results in collections received. The cost should be related to the number of accounts becoming overdue,

<i>Department</i>	<i>Volume</i>	<i>Accuracy or Quality</i>	<i>Speed</i>	<i>Cost</i>
Purchasing and supply department	Total expenditures	Number of errors found by other departments	Oldest unfilled requisition	Per dollar spent
	Number of requisitions for supplies			Per dollar of company's total income
	Number of salesmen interviewed			Per account
Filing	Approximate number of pieces returned to files (obtained by measuring requisitions on returned cases)	Number of errors found by other departments	Number of complaints regarding delay	Per account
		Ratio of errors in file in 500 cases tested		Per dollar of company's income
Messenger	Weight of incoming and outgoing mail	Number of complaints of misdelivery	Per cent of messenger trips completed on schedule	Per account
Addressograph	Number of impressions made	Number of errors found by other departments	Number of jobs completed on schedule	Per impression
	Number of new plates		Number of jobs completed late	Per account
	Number of plates changed			Per dollar of company's income
Agency department of a life insurance company	Number of agents producing paid-for business	Number of errors found by other departments	Percentage of contracts completed within two days after receipt of papers	Per agent producing
	Amount of new premium income	Proportion of business paying premiums for two full years	Oldest incomplete contract papers	Per dollar of new premium income
	Increase of business in force			
	Miles traveled in agency supervision			

Fig. 121.—Items on Typical Departmental Control Reports.

and also to the total number of accounts of the company. If the latter figures are secured, the supervisor can see not only his immediate operating efficiency but also the results secured by the letters. He should know the degree to which he is successful in overcoming the tendency of customers who are once in arrears to fall into arrears again. If he devises a method of holding down the number of overdue accounts coming to his department, he should have a measure of its results.

**Administrative and executive reports.** The second principal kind of report is the administrative or executive report. Much of what has just been said regarding periodic departmental reports applies with equal force here. Administrative or executive reports, such as statements of operations and the periodic report of the president or general manager to the board of directors, are often simply magnified departmental reports.

One of the most usual kinds of administrative reports is the annual departmental executive report. The primary purpose of this report, which may be prepared by each department head for the chief executive, usually the president or general manager, is to summarize the results of the year's operations. It may also contain recommendations for the coming year. Clarity, conciseness, accuracy, and logical arrangement of subject matter, which have been previously mentioned, are applicable to the preparation of reports of this type. It is particularly desirable that annual departmental executive reports emphasize essentials and results rather than details. In writing the report, the department head should remember that matters that may be important to section supervisors in their daily work, and to him as the department-head, are for the most part mere details from the point of view of the chief executive.

**An office manager's annual report.** The following extracts from an annual departmental report prepared by the office and personnel manager of a well-known company illustrate the main points of reports of this kind:

## Office Service Department Organization

The following comprises a list of the more important changes in the activities of the department during the year. Each has been undertaken with a view to improvement in service, decrease in cost, or both:

1. In March, arrangements were made for a closer control over all mimeograph, multigraph, and typing work requested to be sent outside, with a view to doing as much of this work as possible here, thus giving the same service, in point of time and quality, to the departments but at a considerably reduced cost. The results of this arrangement have been most gratifying, resulting in actual savings which can be definitely calculated at \$6128.

2. As a result of the operation of the bonus plan in the typewriting department, we have actually spent \$3600 less in 19— than in 19—, despite an average increased production per employee of approximately 33½ per cent.

3. Effective November 21, Mr. Edwards, head of the Shipping and Receiving Department, was transferred from Mr. Payne's department to the Office Service Department, reporting directly to the writer.

4. Arrangements were made for providing additional and better service for the collection of dictating-machine cylinders.

5. A study of the special jobs which information clerks and others were called upon to do revealed the fact that to have an employee attached to the Office Service Department but available on call to any department having need of extra service for a few days to tide over a peak load, to fill in during vacations, or to take the place of a regular employee absent on account of sickness, would be a desirable plan. Such a person has been employed since March. The arrangement has worked very satisfactorily and is being continued.

6. A simple system of record control, designed to show what Royal, the machine repair man, does each day, and also the cost to us of maintaining machines, was installed. As a result of this plan, we had the facts on which to appraise a proposal that we spend some \$8000 to replace certain present office equipment. Thus far, we have spent only about \$500 for such replacements.

7. A system of personnel records, including an employee's history card, a requisition for employees, and a weekly report of salary changes, was installed. As a result, we now have in one place all pertinent facts regarding each employee.

8. Three simple tests for applicants, which are designed to,

assist the employment manager in weeding out the obviously unfit, were installed.

9. A section of wooden sorting racks was replaced with adjustable steel racks in the mail opening cage.

10. Automatic towel-vending machines have been installed in both the men's and women's rooms on all floors except the 5th, 7th, and 8th. This service has cost no more than the former individual towel distribution plan, and has saved the time of distributing towels each week as well as the unavoidable losses and shortages which always occurred under the previous arrangement. The arrangement is being extended to cover the remaining floors.

11. Additional facilities in the telephone room have been added to take care of increased traffic.

12. A plan under which the parent company, as well as the district offices and the subsidiary companies, will buy all dictating-machine cylinders from one company, has been worked out. This plan will give uniform service and, because of the quantity discount allowed, will save between \$400 and \$500 a year.

13. In coöperation with various executives and department heads, detailed floor layouts and plans for moving certain departments in connection with the taking over of additional space on the 4th floor have been made.

14. On November 17, Miss Peters replaced Miss Ward as employment manager, the latter having left because of personal business.

Then followed separate sections on special surveys and reports, the preparation of office manuals, conventions attended, general and specific plans for the coming year. The final section, entitled "Conclusion," was as follows:

It is the writer's opinion that three outstanding results have been obtained during 19—.

The first is the establishment of a stronger and more effective organization plan and method in the office service department itself, which has resulted in better service to the company.

The second result concerns itself with cash savings effected by means of a better control of the work done and the reduction in needless expense. We can point directly to a total of \$11,354 saved in 19— in comparison with 19—. This is equivalent to the average net profit on \$100,000 to \$125,000 of gross income.

Third, the special surveys and studies already completed have not only put into writing things which were merely a matter of personal knowledge before, but have also pointed the way to

better organization procedure and methods. This work, in turn, has created on the part of executives, department heads, and others a greater appreciation of the value of proper organization and management. The list of special surveys and reports already requested and planned for 19— as given above, indicates clearly the trend of executive thinking on these matters.

In closing this report, I should be most ungrateful if I did not acknowledge with very sincere appreciation and thanks not only your own constant helpful guidance and constructive criticism, but also that of all of the executives of the company, and particularly that of Messrs. Robertson and Reader.

Respectfully submitted,

Office and Personnel Manager.

**Special reports.** As the name implies, special reports cover all unusual or special matters not included in periodic departmental administrative or executive annual reports. Inasmuch as the subject matter of special reports is surrounded by specific local conditions, it is difficult to outline a procedure that will be applicable in all cases. The method of securing the information, whether by questionnaire, by personal interview and investigation, by learning of the experience of others through books or magazine articles, or by a combination of all three, is one of the first questions to be decided. In a word, the first step is to determine as completely as possible the scope of the investigation.

**Content of the special report.** Since the form itself has much to do with the impression that the special report makes on the reader, it is of importance that the report writer be familiar with this phase of report writing. The content of the report should be divided into three main parts: (1) the introduction, (2) the body, and (3) the summary or recommendations. The introduction usually contains the following: (1) the reason for the report or the authority on which it is made; (2) the kind of information that the report contains, or a brief statement of the subject of the report; (3) a statement of the way in which

the material was secured, together with a list of all the sources of information used (or, if one wishes, reference to a complete list of sources may be given in the appendix); (4) a brief statement of the conclusions reached.

The introduction should be brief and to the point, so that it may be complete on the first page if possible. In this way the reader of the report can get at all the pertinent outstanding facts quickly. If desired, the authority for the report may be eliminated from the introduction and put in a letter of transmittal, which should be sent with the report itself.

The body of the report should be constructed in such a way that the reader is led easily from one point to another. If, for example, the office manager is submitting a report recommending a centralized rather than a departmental filing system, the material for the body of the report might well be arranged in some such order as this:

1. Description of the present filing methods.
2. Reasons why present methods are unsatisfactory.
3. Description of the new methods and the way they will work.
4. Advantages of the new plan.
5. Examples from other concerns that are successfully following the proposed plan.

By following this arrangement, the reader is first made to see the disadvantages of the present plan, and from this point is led logically into viewing with approval the new arrangements recommended.

The conclusion should contain, in as much detail as necessary, the recommendations that have already been stated briefly in the introduction. This gives the reader a definite plan of action and indicates exactly what steps are necessary in order to put the recommendations of the report into practice.

Supporting data that are too detailed or not of sufficient importance to be included in the body of the report may be placed in an appendix following the summary or recom-



mendations. An essential part of a complete and well-constructed report is a table of contents and an index.

**Practical problems of special report preparation.** A difficult practical problem in connection with the writing of special reports is the habit of some chief executives who decide—often quite suddenly—that they want certain special information presented in a certain way. As a first step they call in the person who is in a position, because of the nature of his work, to supply the desired information. The subordinate is told briefly and sometimes none too specifically what is wanted and when it is wanted. The subordinate is expected to produce, within the allotted time, the complete report, prepared in the proper form and showing the information desired.

A short time ago the writer had occasion to witness the difficulties and the resulting adverse reactions of an office manager who was called upon about 9:30 one morning to prepare by noon a certain kind of report for use by the president at a luncheon conference that day. By suspending work on everything else and working steadily without interruption, the office manager could have had the report prepared within the allotted time. However, the president called him into his office on other matters, most of which were more or less routine and could just as well have waited until later, no less than five times during the course of the morning. Naturally, the report was not completed on time, nor did the office manager become very enthusiastic, either about reports in general or about the methods of this particular chief executive.

Special reports have their place and most certainly are necessary to the successful conduct of a modern business organization; but the executive for whom they are prepared should appreciate the work that is involved in their preparation and should understand clearly the relation that they bear to regular work and to the general record keeping activities of the company. In concerns in which the office manager has a direct interest in the preparation of all re-

ports, there is a particularly good opportunity for him to bring about the proper coördination in this respect.

**A special report on centralized employment.** The following report on the desirability of establishing a centralized employment department for applicants for executive positions is a specific example of a well-prepared special report.

In accordance with the resolution of the Executive Committee, adopted at its meeting of March 23, I have been giving consideration to a general Company policy and plan for centralizing our employment work in connection with applicants for executive positions. I have discussed the matter with Messrs. Johnson, Hardy, and Lang.

My conclusions and recommendations are as follows:

1. The principle of further centralizing such employment activities is sound for the following reasons:

(a) By bringing together at one point a list of all requirements for employees, better control will be secured. As it is now, persons seeking such employment may be sent to any one of a number of departments or individuals.

(b) Centralization will enable us to give better service to the organization. Under our present plan, executives and department heads who have vacancies have no single person to whom they can go to secure specific assistance. Furthermore, transfers and promotions from within the Company, with the exception of rank-and-file workers, are difficult largely because there is no central clearing house through which the needs of all departments pass.

(c) Centralization will allow us to better develop our contacts with outside organizations. Both from our own point of view and from that of outside organizations, societies, institutions, and so forth, it is more economical and efficient to clear all matters of this kind through one point.

What is needed, in a word, is a centralized control and a centralized listing of all employment needs throughout the organization.

2. Any plan of centralization which may be adopted should be established on the assumption that the person in charge will make preliminary selections only. This is the principle now followed in connection with rank-and-file workers. As the nature of the position to be filled increases in importance and salary, the practical desirability and necessity of following this principle

quite obviously arises also. The central clearing house should be simply a service activity, established to aid executives and department heads.

3. Such a centralized function should confine its efforts, for the present at least, simply to caring for our own needs. Our ability to be of assistance to outsiders will develop gradually and naturally from this. An attempt to render too far-reaching a service might easily consume an unwarranted amount of time. However, to discover specifically just what types of calls may be made on us by customers, friends, and others outside the Company, I suggest that these requisitions be passed on to the central clearing house as they are received. As we develop a centralized plan for caring for our own needs, we will be in an increasingly better position to help others, particularly as it seems likely that some contact work will be necessary for our own purposes.

4. For the present, I suggest that Mr. Todd, or someone designated by Mr. Johnson and Mr. Smith, or someone else designated by Mr. Lang, continue to interview applicants for positions in their respective fields. However, instead of interviewing all who apply, as is the case now, the person in charge of the central clearing house should talk with all applicants first, sending on to Messrs. Todd and Smith only those whose training and experience appear to warrant further investigation.

5. If the principle of centralization of employment is approved by the executive committee, either along the lines suggested in the previous paragraphs or along others, a memorandum should be prepared stating the policy and plan adopted, naming the person appointed to handle the work, and requesting the staff to list their needs at the central point. In this memorandum emphasis should be laid on the fact that personnel needs arising from a desire to replace present employees with better ones, as well as needs due to specific vacancies, should be listed. In addition, the staff should be urged to notify us of competent persons who are seeking positions and whose experience and training might be of value to us.

I believe that the policy and plan outlined in the previous paragraphs will be found to be practical and effective, yet simple enough so as not to be an undue burden on any single person or group.

**Eliminating unnecessary reports.** While periodic, executive, and special reports are essential in every business organization, it is undeniably true that in many cases an undue amount of time, money, and energy are spent in their

preparation. This is particularly likely to be so in the case of periodic departmental reports. Unnecessary reports are a great economic waste. The elimination of as many of these as possible would bring about a saving in clerical and supervisory pay rolls, and in materials and equipment. Since the progressive office manager is concerned, both directly and functionally, with effecting economies, he should be especially watchful to see that all reports are necessary and that they are of practical utility to those for whom they are prepared.

Mr. E. E. Williams, of the American Optical Company, described the steps taken by his organization in this respect as follows<sup>4</sup>:

It is obvious that a survey first must be made to determine definitely just how many and what kinds of reports are being compiled, before any consideration can be given to their elimination. Collecting this information is no small matter for the large concern which has not previously had an organized system of report collection, routing, and control. Such a survey is complete only when those in charge of the work are positive that they have a record of every report being made within the organization at both regular and irregular intervals.

In collecting this information, we prepared and circulated a simple questionnaire form among all office departments, regardless of whether it was definitely known that certain departments compiled or received reports of any nature. If a department was known to receive certain reports regularly, the names of these reports, the names of the individuals to whom they were routed, and brief résumés of the information contained in the reports were included in these forms. Sufficient space was also left on the form for the individuals involved to express their opinions as to how important they considered the report in question, and for them to tell what actual use was made of the information given.

A careful record was kept to ensure that all questionnaires given out were returned. When these had all been accounted for, we received surprise number one. We found many more reports than we realized were existent. A few of them we failed

<sup>4</sup> Williams, E. E., "Eliminating Unnecessary Reports," *Annual Proceedings*, pp. 81-83. National Office Management Association, 1929.

to recognize altogether. We found others that we imagined had died a natural death a long time before. There were others which we immediately saw no reason for continuing longer.

After the first analysis had been made of the returned questionnaires and reports—for, in some instances, specimen reports were returned with the questionnaires—and after as many reports had been discontinued as was considered advisable, our next step was to go through the remaining reports and check them for a duplication of information. Some instances were found where information supplied in one report was duplicated in another, with perhaps an added feature or two. Discussion with the department heads receiving these particular reports enabled us to eliminate the duplications without much trouble.

We then went over the remaining reports with persons receiving them and discussed the possibility of making some changes in the reports, which would give a better picture of conditions if a little different or additional information were shown. In some instances these changes in the report form necessitated extra work on the part of those compiling the reports, but as the finished product resulted in better control of a given situation, we felt this small amount of extra work was justified.

### Control over the issuance of new additional reports.

The next logical step, after having thus thoroughly and satisfactorily cleaned house in connection with our then existent reports, was to set up a program which would ensure no new additional reports being added without considerable thought being given to their necessity.

The best plan to prevent the creation of additional reports that are not actually necessary is to ascertain definitely their cost and then inform those making the request that this cost will be charged against their respective departments. If the departments are being operated upon a budget basis, it will make the department heads reconsider the necessity for all new reports before having them placed on the regular list. This we did by requiring that authority to issue additional reports must be first obtained from the controller's office.

The final step which we took in connection with the control and elimination of unnecessary reports was to designate one department as the clearing house for all regular reports. This reports and statements department is under the direct supervision of an accountant. All reports are routed to this department, which maintains a record listing the names of all regularly issued reports, the assigned report numbers, the names of those to whom

the various reports are routed, the date when such reports are due, and the approximate cost of compilation.

We had a recent experience in connection with the subject of postage expense control which illustrates how reports may become unnecessary and can therefore be eliminated. In an endeavor to control the postage used in one of our shipping departments, where the amount is very high because of the large volume of parcel-post matter sent to foreign countries, we had been having the head of this department render a weekly report of the postage used on such shipments. After the receipt of a number of such reports, the controller's department, which approves all requests for stamp stocks, knew fairly accurately what the postage expense should be when the shipments from that particular department were approximately a certain number weekly. Therefore, when requisitions for stamps for this particular department were presented for approval, this department knew quite accurately whether or not the quantities specified were in accordance with the usual requirements. For this reason it was unnecessary to continue the weekly stamp-consumption report from the shipping department for, at the end of the month, the ledger account would show the cost of the postage used, and this cost could readily be checked against the volume of shipments for the month. This is an example of how a report, no longer of practical value, can become a parasite on office production.

The finished product of an office is, in the final analysis, its tabulations and reports. These may be balance sheets from the accounting department, graphic charts from the statistical department, tax returns filed with the state or federal governments, or other forms of vital information. A manufacturing establishment is judged by the quality of its finished products. An office should be fairly judged by the quality and value of its reports. A manufacturing establishment making a product that has little or no practical use, and which cannot be sold, meets with but small success. This same truth is equally applicable to the office; the office should not continue to furnish unnecessary reports that are of no practical value. Such reports should be eliminated.

## CHAPTER XX

### *Office Costs and Budgets*

Cost accounting and budgeting are accepted tools of management in the factory. For years sales managers have set sales quotas. More recently, constructive work has been done in applying the principles of cost accounting to the field of distribution. Budgetary control for the activities of the company as a whole is an established procedure in many lines of business.

In the office, however, quite a different situation prevails. Many office managers, to be sure, know the average cost per line of dictating-machine transcription, or perhaps the cost per new employee hired during the year. But when it comes to anything approaching the complete cost analyses and comprehensive budget procedure that other executives have had for years, it must be admitted that what most office managers have to offer is none too impressive, especially when it is compared with data regularly prepared by production and sales executives. If neither the production manager nor the sales manager is willing to be judged by total cost figures on his operations, or by some absurd though conventional ratios, why then should the office manager be willing?

It is pleasant to think of the present era in the profession of office management as the scientific one. It is agreed by all that the purpose of the profession is to accomplish clerical tasks within predetermined limits of time and accuracy, and at the lowest possible cost. But how can

office management honestly be called scientific if it does not provide definite bases for measuring accomplishments in terms of time, accuracy, and costs? In most offices little of real value has been attempted in this direction. Least of all is there an attempt to obtain intelligent cost information.

**Measuring the cost of office operations.** The first step in measuring the cost of office operations is to determine a unit, or a number of units, of work for which costs can be secured. Thus in a wholesale house, for example, the cost per order handled may be used as the unit of calculation. A life insurance company may use the cost per policy issued; a university, the cost per student registered; a bank, the cost of handling each depositor's account. In every case, it will be observed, the fundamental principle is the same, namely, the selection of a unit of work and the calculation of a cost based on that unit.

In considering the cost of doing office work one must constantly bear in mind the fact that the office is a service department to the other departments of the company. In view of this, the problem of unit office costs resolves itself into a question of selecting a number of kinds of service that the office performs for the various departments and not only calculating the cost of each of these services in units of work performed, but also carrying this procedure to its logical conclusion by charging the other departments, at a given rate per unit, for the service. If, for example, a cost per letter or per line is established for the transcription work performed by a centralized stenographic department, the various departments using this service should be charged accordingly.

**Plan of the Jewel Tea Company.** Although several companies have worked out practical and equitable methods of calculating and charging unit expenses of doing office work, the plan put into effect at the main office of the Jewel Tea Company, Inc., by Mr. H. J. Taylor, Office Manager, some years ago is particularly interesting because of its complete-



Unit	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	Economy Exercised
	Pay Roll	Space	Telephone	Ediphones	Typing	Com- puting	Inter- unit	Overhead	Super- vision	Plant	Total	Base	Over-Red	Accu- mulated		
Dept. A Unit 1	406.00	66.56	10.65	30.64	5.37	.75	.89	92.17	225.94	11.57	177.04	182.51	5.47	8.66*		
2	662.00	98.84	12.45	36.22	5.97	8.68	8.68	92.17	225.94	11.57	177.04	182.51	5.47	8.66*		
3	778.00	98.84	12.45	36.22	5.97	8.68	8.68	92.17	225.94	11.57	177.04	182.51	5.47	8.66*		
4	778.00	98.84	12.45	36.22	5.97	8.68	8.68	92.17	225.94	11.57	177.04	182.51	5.47	8.66*		
5	778.00	98.84	12.45	36.22	5.97	8.68	8.68	92.17	225.94	11.57	177.04	182.51	5.47	8.66*		
6	1276.45	124.15	30.65	73.70	24.30	101.77	101.77	31.29	223.04	13.63	1484.38	1520.75	36.37	1.37		
7	566.00	35.84	11.28	8.30	101.70	62.67	62.67	33.47	27.94	13.63	2406.95	2407.33	945.48	143.89*		
8	1071.15	95.16	19.02	23.25	8.19	426.76	426.76	65.99	302.56	14.27	2128.54	2128.54	230.30	187.45		
9	624.00	70.66	4.69	13.40	20.08	24.91	24.91	65.99	302.56	14.27	1156.36	1277.79	151.43	496.60		
Total Dept. A	5652.60	687.36	122.40	251.28	164.15	765.75	765.75	641.92	2740.73	43.43	10942.37	12212.03	1369.60	4194.91		
Dept. B Unit 1	1110.00	49.16	3.65	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
2	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
3	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
4	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
5	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
6	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
7	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
8	350.00	63.38	18.36	337.57	85.32	40.01	40.01	45.89	538.20	.76	2331.80	2331.80	28.21	36.57		
Total Dept. B	4092.00	607.22	86.15	660.84	103.41	71.34	71.34	674.25	1984.08	20.65	8200.21	8200.21	457.58	2238.44		
Dept. C Unit 1	1570.00	221.44	7.13	335.96	31.36	332.53	4.23*	83.88	761.55	2.56	3488.33	3488.33	326.35*	1.29		
2	461.00	63.63	7.13	147.00	32.21	332.53	61.08	205.79	761.55	2.56	1291.71	1325.26	45.85*	139.37*		
3	680.00	99.84	17.00	46.52	8.48	332.53	56.85	93.24	329.71	2.56	700.00	700.00	135.34	392.25		
4	386.00	103.94	16.72	59.48	72.05	332.53	56.85	97.08	187.16	2.56	6818.40	6818.40	105.22*	377.88		
5	3100.00	591.11	78.65	599.48	72.05	332.53	56.85	552.02	1563.10	2.56	6818.40	6818.40	105.22*	377.88		
Dept. D Unit 1	715.00	118.28	9.64	3.68	3.96	10.19	20.59*	110.46	346.67	256.11	256.11	244.04	11.17*	18.36		
2	461.00	63.63	7.13	147.00	32.21	332.53	4.23*	205.79	761.55	2.56	3488.33	3488.33	326.35*	1.29		
3	290.00	56.82	10.66	27.42	1.57	3.96	2.43*	74.59	223.04	824.41	824.41	766.49	57.92*	114.15*		
4	530.00	15.36	.92	3.03	1.41	3.96	2.43*	121.33	240.61	574.76	574.76	670.73	95.97	326.02		
5	35.00	53.76		23.95	4.80		125.73	50.20	256.58	3.64	522.00	522.00	57.56	47.74		
6	85.00						4.23	41.21	41.21	130.44	130.44	130.44	95.83			
7	96.18						46.98*	46.63		95.83	95.83	95.83				
Total Dept. D	2176.18	392.71	70.21	63.20	11.02	14.34	12.48	366.73	1055.14	3.64	4174.65	4288.14	115.49	569.59		
Ediphones & Typ- ing Unit	1123.65	74.07	34.40	1504.89	350.63	1184.01	40.48*	69.18	504.81		1855.49	1855.49				
Computing Unit	668.00	37.03	19.37				98.33	34.59	326.69		1184.01	1184.01				
Total	16312.43	2389.50	430.18					2938.09	8904.55	70.28	30135.63	31873.14	1737.51	7370.82		
														1182.57		
														584.99		

Red New

\* Red Figures.

Fig. 122.—Cost of Operations Data Sheet.

ness and simplicity, and is therefore described here in some detail.<sup>1</sup>

This plan may best be explained by using four forms as a basis. Figure 122 is the control sheet used to distribute the various costs of operation among the respective units and shows at the head of the columns the different classifications of the costs of operation. The different departments and the units in these departments are listed in the first column on the left-hand side. In the second column are listed the pay-roll charges to the various units. The pay-roll charge for each unit is taken from the pay-roll figures, which are compiled in the pay-roll unit in accordance with a list of the employees working in each unit and the length of time each works during the period. The clerk in charge of the Cost of Operations Plan secured the time worked by each employee in the respective units from the assistant office manager who controls placement of personnel in the office. A form is used by the assistant office manager for informing the clerk in charge of the Cost of Operations Plan as to transfers, releases, or employment of office employees.

### Charges for floor space.

In column 3 on the control sheet are placed the charges for space occupied by the various units in the office. To determine the charge applicable to each unit for space occupied, the total rent is first reduced to a unit cost per square foot. The amount of space occupied by each unit is determined, and this figure is multiplied by the square foot rental. The result is a periodic charge to the unit for space occupied. In case a unit makes a reduction in the number of workers, the unit is released from the charge for the space occupied by the desk at which the worker sat. If this space is not immediately assigned to some other unit, it is carried as a charge to a unit specified as "general." The total of the charge for space to "general" then gives us the total charge for space not being utilized in any one period.

The various units of the office naturally try to economize as much as possible on space, but in order to avoid a "cramped" condition in any unit, a minimum of four feet for aisle space back of each desk is required. As each unit head knows exactly what the cost of space occupied by his unit is, it has been found

<sup>1</sup> Adapted from Taylor, H. J., "Methods of Computing and Charging Office Costs of Operations," *Handbook of Business Administration*. McGraw-Hill Book Company, Inc., New York, 1931.

that the unit head is very much interested in utilizing the space used by his unit to the best advantage.

### Charges for equipment.

Column 4 in Figure 122 shows the charge against each unit for depreciation of equipment. These figures are determined by ascertaining the value at which equipment used by each unit is carried on the chattel ledger in the general accounting unit. By use of the company depreciation charge of 1 per cent per period, the charge to be made is determined. When the plan was put in operation, a complete inventory was made of the capital assets in the office and each unit head was given a statement of the equipment charged to his unit. The clerk in charge of the Cost of Operations Plan keeps a record of all equipment, and is informed by the assistant office manager of any transfers of equipment from one unit to another, or of equipment sold or junked. The assistant office manager also informs the Cost of Operations Plan clerk of the placement of all new equipment received in the office.

The unit head is held responsible for the condition of the equipment assigned to him. His tendency is to see that good care is taken of the equipment in the unit, in order that it will not become worn out and require replacement. If new equipment is required before the old has been totally depreciated on the books, the unit is charged with the loss on the old equipment as well as with depreciation on the new. The tendency is also to be careful in requisitioning new equipment. The unit head naturally does not wish to have the charge of depreciation increased, and, therefore, will not requisition equipment unless he has a real need for it.

### Distribution of transcription costs.

The company has a central stenographic unit and an installation of fifty Ediphones. There are nine transcribers in the central stenographic unit and three typists. The charges for transcription of correspondence and other material dictated through the Ediphones are distributed in column 5 on the control sheet. The central stenographic unit is considered as any other unit in the office in accumulating costs of operation. The classification of the cost of operating the Ediphone and typing units is shown on line 36 of Figure 122. Ediphone transcription charges to the various units are based on a cost per line. The entire production of the Ediphone unit is divided into the total cost of oper-

ating the unit for the period and an average cost per line secured. The number of lines of Ediphone work transcribed for each unit during the period is then multiplied by the average cost per line and the total amount to be charged is thus ascertained.

The distribution of the charges for Ediphone work to the various units has resulted in a very marked reduction in the volume of lineage of the various units. The reduction has been obtained largely by a decrease in the length of the letter, but some of it is attributable also to the discontinuance of unnecessary letters.

In order to assist the unit head in reducing Ediphone transcription charges, figures which show the efficiency of the various dictators in dictating have been prepared. This information is accumulated by arriving at the time necessary for the transcriber to transcribe the dictation of the various dictators. The dictators are then listed according to cost for transcription work, and the unit head is given a report showing the efficiency of each dictator.

### Computation of typing and calculating charges.

The typing charges are shown in column 6. These charges are for typing which cannot be charged on a line basis, such as form statistical reports or financial statements. A cost per hour is computed by accumulating the number of hours used during the period on typing work and the total charges for the typists who perform the work. As the typists are in the central stenographic unit, the periodic charges for the operation of this unit are combined with those of Ediphones as shown on line 36 of Figure 122.

The charges for calculating work are shown in column 7. All computing work is charged on a time unit basis. At the close of the period, the number of hours during which the several operators worked are determined. The total cost of operating the calculating units divided by the total number of hours worked during the operating period gives the average cost per hour for computing work. This average unit cost multiplied by the number of hours of work done for each unit gives the charge for computing expense which is allocated to each unit in the office.

The economy and efficiency of the central stenographic and the computing units are measured in a different manner from those of the other units in the office. In the case of Ediphone transcription work, the efficiency and economy exercised is measured by the average periodic cost per line of the work turned out by the unit. If the average periodic cost per line decreases, it is obvious that greater economy and efficiency have been exercised

in the operation of this unit. A record of the daily line production of each operator is kept and it is known, therefore, approximately how much each operator contributes to the economy effected by the unit.

The efficiency of the computing unit is measured by accumulating results on specific jobs. Uniform branch records are kept on which the same amount of computing work is done periodically. By keeping a record of the number of these forms assigned to each operator and to the computing unit as a whole it is possible to determine the approximate efficiency and economy exercised by the group and by each operator.

### **Charges and credits for inter-unit work.**

In case a unit releases a worker for work in another unit, or in case work which is normally assigned to a particular unit is done for that unit by another unit, a debit and credit charge is made on the Cost of Operations control records to cover the inter-unit work done. Figure 123 shows the form used in accumulating information on the inter-unit work done in the office. The unit cost of inter-unit work is secured by dividing the total cost of operating the unit by the total number of hours worked by the members of the unit. In this manner an hourly unit cost of work for each unit in the office is secured. Since credit has been given for inter-unit work, the company has found that considerable saving is made because the unit head has an incentive to release any idle worker for work in other units. As shown on line 39 of Figure 122, the total inter-unit work for the four-week period was \$333.11. It will be noted that the debit and credit charges in column 8 for inter-unit work balance. Inter-unit work, which was practically unheard of in the office before the Cost of Operations Plan was installed, has now amounted to a figure which alone is more than equal to the total cost of handling the Cost of Operations Plan.

### **Overhead expenses.**

Overhead expenses such as light, heat, water, equipment repairs, telephone, telegraph, and postage are charged to the various units in column 9 of Figure 122. Charges for overhead are computed on a basis of the square feet occupied by the various units as compared with the total office space. In other words, if one unit occupies 10 per cent of the total space and if the total "overhead" charge for the entire office is \$1000, the charge applicable to this unit would be \$100. Any decrease in space occupied naturally brings about a decrease in overhead expense.

## Charges for supervision.

Charges for supervision are shown in column 10 of Figure 122. The total "pay roll" as charged in column 2 is subtracted from the total of the executive and general office pay rolls. Fifty per cent of this figure is then arbitrarily considered to be the amount that should be charged to Supervision of the Home Office, the

To Office Manager:	
Dr.	<u>Unit 2 Sept. B</u>
Cr.	<u>Unit 8 Sept. A</u>
Work started	<u>10/1/-</u>
" completed	<u>10/4/-</u>
Number of hours consumed	<u>25</u>
Work done by	<u># 142</u>
Nature of work	<u>Analysis of Costs</u> <u>of Automobile Operation</u>
Approved by	<u>John Doe</u>
Head of unit for which work was done	
Unit Cost	<u>\$ 1.2356</u>
Total Cost	<u>\$ 30 89</u>
Approved	<u>W. S. Wm</u>
For Office Manager	

Fig. 123.—Record of Inter-Unit Work Done.

balance being arbitrarily set for Plant and Field Supervision. This amount is then divided among the various units in the office in the ratio of:

1. The average salary paid to the workers in each unit to the average salary in the entire office.
2. The number working in each unit to the number working in the office.

In other words, the factors of the number working in each unit and the average salary paid in each unit are used in determin-

ing the charge to each unit for "Supervision." While the total amount which is distributed to "Office Supervision" is an arbitrary amount, the company believes it has arrived at a fairly equitable manner of distributing the arbitrary figure. By decreasing the number of employees working in his unit, the unit head automatically decreases his "Supervision Charge" as well as the charges for pay-roll space, overhead, and depreciation of equipment.

In column 11 are placed the charges for space occupied with files in the Chicago plant by the respective units. This charge is made on a basis of the number of square feet occupied by the files, and the total of these charges is equal to the charge in "General Accounting" made by the plant against the home office for the total space occupied by home office files.

Column 12 shows the total periodic charge against each of the units in the office. On lines 10, 19, 25, and 34 are shown the total costs of operation for the respective departments in the office.

#### Calculation of economy effected.

The economy effected by the various units in the office is determined by comparing the base, as shown in column 13, with the total cost of operation as shown in column 14. A red figure designates that the unit has operated at a total cost of operation above the base figure while a black figure designates that the unit has operated below its base cost. The base figure is secured by taking the average cost of operation during the previous periods. For instance, the bases for the last six periods are secured by finding the average cost of operation for each unit during the first seven periods of the year. In column 15 is placed the accumulated amount of operation cost below or above the bases of each unit for the operating year, up to and including the current period. The total of column 14, which amounts to \$1737.51, equals the total economy effected by the office during the current four-week period while the total of column 15, which amounts to \$7370.82, represents the accumulated economy for all periods to date.

Line 39 shows the base adjustments made, which during the period amounted to \$1182.52. Adjustments are made on both a temporary and a permanent basis. On line 40 is shown the net reduction without allowing for adjustments.

#### Control of new work.

The control of new work shown in Figure 124 has tended to decrease the amount of new work started in the office. The

person requesting the new work is now able to measure the need for this work in terms of its estimated cost, and in many cases it has been found that he did not believe the work would cost more than one fourth of the actual cost. In a number of cases, after obtaining the cost figures, the person requesting the work

To: Office Manager	Date: _____
Information, statistics, or records, which have formerly not been part of the regular routine of the <u>Dept. 2</u> <u>Number 8</u> unit have been requested by <u>John Doe</u> of the <u>Dept. 2</u> <u>Number 1</u> unit	
The following is a description of the work, including its source, how it is accumulated, and its purpose: <u>Production Preparation</u> <u>of report which will show record of total purchases -</u> <u>by branches - items purchased - cost - source form -</u> <u>Temporary report for 3 periods</u>	
Is proposed work to be transferred from another unit, or is it entirely new? _____ If transferred, from what unit? _____ (weekly)	
Estimated time for doing the work (periodically) <u>15</u> hrs. ____ min.	
Signed <u>John Doe</u> Head of the unit which is to do the work, if approved.	
(week) Estimated cost per (period) <u>\$ 18.00</u> (To be filled in by office manager)	
The head of the unit which is to do the work, if approved, will report to the office manager at the end of the first week or period during which the new detail was worked, the exact number of hours and minutes that the additional work required, in order that the cost of operation base of the units affected may be adjusted	
All new work, before it is commenced, should have the approval of the office manager; before his approval can be secured, the estimated "time required" must be filled in.	
Approved <u>John Doe</u> Head of unit requesting work Approved <u>John Doe</u> Office Manager	
Exact time required <u>14</u> hrs. <u>30</u> min. (To be filled in after detail has been worked first time)	
Exact cost <u>\$ 17.50</u> To be filled in by Office Manager	
Date work started _____ Date base adjusted _____	

Fig. 124.—Request for New Work.

has decided that the results, to be obtained from doing the new work do not warrant the expenditure.

### Periodic reports of results.

The unit heads are kept informed of their progress in connection with operating costs by means of a report covering each period's performance. Figure 125 illustrates this report. The ten units out of the total of thirty in the office whose accumulated economy exercised is of the largest per cent to the accumulated



base are placed in the order of their performance on the "Home Office Expense Honor Roll." The various expenses connected with the cost of operating the units are listed on this form, together with the various expenses for the previous period for comparative purposes. The base of the unit is also placed on this form, together with any adjustment, temporary or per-

From: Office Manager

TO: Head of Unit 8, Dept. A.

Subject: Current Period Expenses - Cost of Operation  
in Home Office.

The names of the units, which, during the first \_\_\_\_\_ periods accumulated, qualified for the HOME OFFICE EXPENSE HONOR ROLL, are listed below in the order of their standing:

- |                      |                       |
|----------------------|-----------------------|
| 1. Unit 7 - Dept. A. | 6. Unit 5 - Dept. C.  |
| 2. Unit 5 - Dept. A. | 7. Unit 9 - Dept. A.  |
| 3. Unit 4 - Dept. A. | 8. Unit 4 - Dept. E.  |
| 4. Unit 2 - Dept. B. | 9. Unit 8 - Dept. A.  |
| 5. Unit 4 - Dept. D. | 10. Unit 6 - Dept. B. |

The expenses incurred in the several factors which entered into the cost of operating your unit during the current and preceding periods, are listed below for your comparative purposes. For your comparative purposes the figures for the total expenses and the base figures are also listed.

Unit 8, Dept. A.

	<u>Current Period</u>	<u>Preceding Period</u>		
Pay Roll	\$ <u>1071.</u>	\$ <u>1085.37</u>		
Space	<u>92.16</u>	<u>92.16</u>	Base	\$
Depreciation	<u>19.02</u>			
Ediphone	<u>23.25</u>		Adjustment	\$ <u>17</u>
Computing	<u>426.76</u>		(Temporary)	
Typing			(Permanent)	
Inter-Unit		<u>1.58*</u>		
Overhead	<u>86.08</u>	<u>1.29</u>		
Supervision	<u>519.36</u>	<u>557.05</u>	Base	
Plant Files	<u>14.27</u>	<u>1.27</u>	as adjusted	

TOTAL

exercised period	\$ <u>209.39</u>
(Red over base-black under base)	
Accumulated economy exercised	\$ <u>547.56</u>

\* Compiling Statistics as further explained on attached schedules #4

\* Red figures

OFFICE MANAGER

manent, that has been made during the period. The economy exercised by the unit for the period is the difference between the total cost of operations and the base as adjusted. The accumulated economy exercised is also placed on this form, showing the result for the year to date.

It is possible to balance the figures of each column on Figure 125 with the general accounting records, thereby securing proof of the accuracy of the figures.

### Results secured.

The results secured under the operation of this plan have been very encouraging. There has been a gradual decrease in the cost of operating the office. The economies effected have made it possible to return some of the savings to office employees in the form of salary increases. In making salary increases the efficiency of the work of the individual in the respective units is taken into consideration as well as the degree to which the individual has contributed to the economies effected in the unit.

The office is handling \$1182.52 per four-week period of new work started during this year. This new work has been approved as work that will bring about an increase in sales volume or a decrease in operating expenses. The total number of employees in the office has been reduced from 182 to 165. At the same time, more salary increases than ever before have been given and the salaries of all those working in the office have been increased. This is in line with the company's policy to return to the individual worker, in proportion to his or her contribution thereto, part of the savings effected through greater economy and efficiency.

**Cost control plan of the Meredith Publishing Company.** Although similar in its fundamental purpose, a somewhat different method has been worked out by Mr. Hadar Ortman, Director of Operation and Finance at the Meredith Publishing Company.<sup>3</sup> The plan, which has been in opera-

<sup>3</sup> This plan was described by Mr. Ortman in a paper entitled "Cost Control—An Important Feature of Scientific Office Management," which was one of the winning papers of the Leffingwell Award in 1932. The paper was published in full in the 1932 proceedings of the National Office Management Association (pages 44-59). The statement of the plan given in the text is adapted from a summary which appeared in *Management Methods*, pp. 510-532. McGraw-Hill Publishing Company, Inc., New York, September, 1932.

tion since 1930, controls the work that is performed by a variety of clerical units and has proved both practical and profitable. The plan is a combination of accounting, cost accounting, and budgeting, and includes an application of standard cost methods for the purpose of distributing clerical service unit costs to customer departments. Because of limited space, the description has been simplified so as to serve as an illustration of the principles involved, rather than as a complete technique.

### Application to the correspondence and stenographic departments.

To picture the tasks of the correspondence department, Figure 126 has been prepared, showing a hypothetical analysis of the

OPERATION ANALYSIS OF THE CORRESPONDENCE DEPARTMENT									
<i>Operation</i>	<i>Class of Work</i>	<i>Number and Name</i>	A	B	C	D	E	F	
			<i>Sort</i>	<i>Up</i>	<i>As-sign</i>	<i>Dic-tate</i>	<i>Proof &amp; Sign</i>	<i>File</i>	
1.	Form letters .....	Class A	x						x
2.	Form letters .....	Class B	x	x	x				x
3.	Fill in letters .....	Class A	x		x		x		x
4.	Fill in letters .....	Class B	x	x	x		x		x
5.	Form paragraphs...	Class A	x				x		x
6.	Form paragraphs...	Class B	x	x	x		x		x
7.	Dictated letters ....	Class A	x			x	x		x
8.	Dictated letters ....	Class B	x	x	x	x	x		x

Fig. 126.—Operation Analysis of the Correspondence Department.

work. Four methods of correspondence are used, requiring eight routines numbered 1, 2, 3, and so forth. Six different operations are performed, designated as A, B, C, D, E, and F.

Naturally, the pay roll constitutes the largest expense item and is therefore of sufficient importance to necessitate accurate analysis and measurement. To cover the pay-roll cost of each clerical operation of any importance, a set of cost accounting records is kept similar to Figure 127 (consider that the "New Standard" line has not been added yet). The number of work units handled, total pay-roll costs, and number of hours are obtained by analysis of time cards and various production rec-

ords. Through simple division, the production per hour, the wage cost per hour, and the wage cost per unit are obtained. These three factors measure quite adequately the result of payroll cost expended on operation A. It shows the variations in unit costs in terms of production per hour and wage cost per hour.

Another important item of variable expense in the correspondence department is the cost of stenographic work. Assume that this item deserves special attention and that this work is being performed by a stenographic department outside the jurisdiction of the correspondence department. Assume that the steno-

OPERATION A						
<i>Month</i>	<i>Number Units</i>	<i>Pay Roll Cost</i>	<i>Number Hours</i>	<i>Pro- duction Per Hour</i>	<i>Wage Cost Per Hour</i>	<i>Wage Cost Per M Units</i>
January . . .	160,000	\$1,989.00	3,900	41.0	\$0.51	\$12.43
February . . .	155,000	1,930.00	3,860	40.0	.50	12.45
March . . . .	145,000	1,842.12	3,612	40.1	.51	12.70
April . . . . .	140,000	1,855.00	3,500	40.0	.53	13.25
May . . . . .	140,000	1,836.00	3,600	38.8	.51	13.11
June . . . . .	125,000	1,435.85	3,055	40.9	.47	11.48
July . . . . .	120,000	1,445.25	3,075	39.0	.47	12.04
August . . . .	120,000	1,457.00	3,100	38.7	.47	12.14
September . .	135,000	1,666.82	3,450	39.1	.48	12.34
October . . . .	140,000	1,750.00	3,500	40.0	.50	12.50
November . . .	150,000	1,938.00	3,800	39.5	.51	12.92
December . . .	170,000	2,104.96	4,048	42.0	.52	12.38
Total . . . .	1,700,000	\$21,250.00	42,500	40.0	\$0.50	\$12.50
New standard				42.0	\$0.50	\$11.90

Fig. 127.—Operation A.

graphic operations are charged out on the basis of standard costs, expressed in terms of certain costs for each type of letter, and a certain cost per thousand strokes for each type of letter. In this case, the stenographic department might be said to have set the price on its services, but the correspondence department head controls the volume of services required insofar as the stenographic department is concerned. The customers of the correspondence department control the volume of letters to be sent out, while the correspondence department is responsible for the length of letters, and perhaps to some extent for the kind of letters.

Separate operation analysis records are kept for the steno-

graphic department operations, similar to Figure 127 and other tables, which will be shown later for the purpose of controlling the effectiveness of the stenographic operations. It might be determined that an analysis of stenographic costs, as shown in Figure 128 (here again, consider that the last line "New Standard" has not yet been added), should be kept for the purpose of indicating tendencies as to length of letters used in correspondence, and to show the effect of stenographic costs on work units for the completion of which the correspondence department is responsible.

The remaining variable costs might be of less relative importance and therefore may not require a very specific analysis. Fixed expenses scarcely ever warrant cost accounting analysis in a way similar to pay-roll or, perhaps, stenographic costs. Some method must be decided upon, however, whereby these expenses can be distributed to the standard costs for correspondence work with a reasonable degree of accuracy.

Assume it has been decided that the variable expenses, except pay roll chargeable to productive operations and stenographic expenses, are distributed on the basis of the number of letters, independent of type, and that the fixed costs are to be distributed on the basis of productive pay roll. On this basis, an analysis, as shown in Figure 129, could then be made. If the pay roll charged to operation A, according to Figure 127, and similar cost kept for the other operations were to be added, the sum would equal the productive pay-roll item shown in the fixed cost analysis.

### **The average letter cost.**

In order to determine the cost of completing the average letter of a certain type during a certain month, the following unit costs are added: Pay-roll cost of operation performed (Figure 127, and similar tables covering other operations); stenographic costs for the particular type of letter (Figure 128); other variable costs per letter (Figure 129); and a fixed percentage of productive pay-roll cost.

### **Budget procedure.**

If cost accounting records similar to those just mentioned are available, as well as general accounting records, budget preparation should start with an analysis of the detailed cost records. Take the data contained in Figure 128. From the standpoint of budgeting, it is desired to obtain a standard wage

# STENOGRAPHIC COST ANALYSIS

Month	Number	Cost		Form Paragraphs	Cost	Cost		Dictated Letters	Cost	Cost	
		Fill Ins	Per M Letters			Per M Letters	Number			Per M Letters	Per M Letters
January	83,200	\$915.20	\$11.00	8,000	\$370.16	\$46.27	28,800	\$1,440.00	\$50.00		
February	80,600	883.38	10.96	7,500	360.38	46.50	27,900	2,408.95	50.50		
March	75,400	791.70	10.50	7,250	332.78	45.90	26,100	1,331.10	51.00		
April	72,600	756.12	10.47	7,200	331.20	46.00	25,200	1,291.50	51.25		
May	73,000	670.15	9.18	6,800	311.25	45.80	25,200	1,302.84	51.70		
June	65,000	630.50	9.70	6,250	283.75	45.40	22,500	1,125.00	50.00		
July	62,300	546.41	8.77	6,000	271.80	45.30	21,500	1,075.59	50.02		
August	62,500	612.50	9.80	6,050	273.76	45.25	21,650	1,082.50	50.00		
September	70,200	716.04	10.20	6,700	302.17	45.10	24,350	1,190.72	48.90		
October	72,800	726.54	9.98	7,000	315.00	45.00	25,200	1,241.10	49.25		
November	78,000	760.50	9.75	7,500	333.75	44.50	27,000	1,296.00	48.00		
December	88,400	830.96	9.40	8,500	374.00	44.00	30,600	1,514.70	49.50		
Total	884,000	\$8,840.00	\$10.00	84,750	\$3,860.00	\$45.40	306,000	\$15,300.00	\$50.00		
New standard			\$ 9.50			\$40.86			\$45.00		

Fig. 128.—Stenographic Cost Analysis.

cost per unit, which is derived from a production per hour factor and a wage cost per hour factor.

In analyzing the monthly production per hour figure for the past year, an exceptionally low figure for one month might be found, due perhaps to an unusually large number of beginners of low efficiency. Another month might be unusually high, due perhaps to some temporary incentive provided for this operation. Perhaps the last three months' figures are higher than corresponding figures for all the previous months, because of improvements in methods introduced at that time. Any such conditions should be discussed when the figures are analyzed. What can be expected along the lines of methods, improvements, turnover reductions, and so forth, during the coming year should be determined. After such a discussion, a figure is finally agreed upon which represents the production per hour factor which should be reached and maintained during the coming year.

In a similar fashion, the wage cost per hour for the last period is analyzed. Exceptional values may be explained by the proportion of new employees at low salaries, versus regular employees at regular salaries. The effect of extra overtime, the wage rate paid in comparison with the local labor market rates, and so forth, should be considered. Situations and changes which might exist during the coming period should be anticipated, and, finally, a fair wage cost per hour standard agreed upon. By dividing the anticipated wage cost per hour by the expected production per hour, the standard wage cost per unit is obtained (last line, Figure 130).

For the purpose of budgeting it is also necessary to ascertain what the stenographic department standard costs for the next year will be. This information is obtained from the head of the stenographic department; it is shown in the last line of the table. Any contemplated change in correspondence department methods that would result in more or less work on individual letters in each group should be discussed and appraised as to its possible effect on stenographic work. Assume, for instance, that it has been decided to personalize fill-in letters, which so far has not been done. Naturally, this would increase the stenographic costs. From such an analysis as is contained in Figure 128, the head of the stenographic department can easily tell how much the cost per letter would be increased through such a change. In a similar way, all other stenographic costs are reviewed, and new unit cost standards determined.

The fixed items must be handled somewhat differently. The total amount of fixed costs estimated for the next year which

# REMAINING VARIABLES AND FIXED COST ANALYSIS

Month	Number of Letters	Postage, Telephone and Telegraph		Supplies		Repairs and Maintenance		Sundry Expense		Fixed Costs	
		Cost	Per M	Cost	Per M	Cost	Per M	Cost	Per M	Prod. Pay Roll	% Fixed
January	160,000	\$3,640	\$22.75	\$944.36	\$5.90	\$95.00	\$0.59	\$40.00	\$0.25	\$2,008.33	\$8,641.00 23.24
February	155,000	3,460	22.32	925.00	5.97	91.10	.59	20.37	.13	2,008.33	8,578.00 23.41
March	145,000	3,330	22.96	909.06	6.27	88.40	.61	56.06	.39	2,008.33	7,844.12 25.60
April	140,000	3,200	22.86	855.00	6.11	75.00	.54	121.19	.87	2,008.33	7,655.00 26.24
May	140,000	3,220	23.00	810.94	5.79	91.00	.65	24.38	.17	2,008.33	7,636.00 26.30
June	125,000	2,810	22.48	705.34	5.64	72.50	.58	19.54	.16	2,008.33	6,595.55 30.45
July	120,000	2,730	22.75	670.30	5.58	65.00	.54	36.27	.30	2,158.34	6,395.25 33.75
August	120,000	2,760	23.00	697.00	5.81	65.00	.54	43.33	.36	2,158.34	6,482.00 33.29
September	135,000	3,100	22.96	803.41	5.95	88.36	.65	31.27	.23	2,158.34	7,204.82 29.96
October	140,000	3,140	22.43	820.19	5.86	80.64	.58	29.36	.21	2,158.34	7,550.00 28.59
November	150,000	3,430	22.87	893.40	5.93	90.00	.60	28.72	.19	2,158.34	8,163.00 26.41
December	170,000	3,880	22.83	986.00	5.68	98.00	.58	49.51	.29	2,158.34	9,254.96 23.32
Total	1,700,000	\$38,700	\$22.77	\$10,000.00	\$5.88	\$1,000.00	\$0.59	\$500.00	\$0.29	\$25,000.00	\$92,009.99 27.17
New Standard	1,920,000		\$22.50		\$5.88		\$0.52		\$0.26	\$26,000.00	\$104,000.00 25.00

Fig. 129.—Remaining Variables and Fixed Cost Analysis.



are chargeable to the correspondence department are obtained from the auditor, who generally gathers and computes them for all service units. Before determining the fixed pay roll, and the depreciation, insurance, and tax items, he probably has consulted the office manager. The fixed amount is to be distributed on the basis of productive pay roll, a figure which so far has not been computed in connection with the budget work. The only pay-roll estimates made so far have been pay-roll costs per unit for each operation. To obtain total figures for productive pay roll, it is necessary to obtain figures on estimated volume to be handled through each operation. From customer departments estimates are secured as to the quantity of each type of letter to be written.

Using the work analysis shown in Figure 126, it is now a simple matter to determine the anticipated volume for each operation. After multiplying these volume estimates by the predetermined wage costs per unit for each operation, the total expected productive pay-roll cost is obtained by simple addition. After having thus obtained the expected fixed cost, and the productive pay-roll costs, the standard percentage of fixed expense for the coming year is computed.

### Computation of standard costs.

The next step in the budgeting procedure is the computation of standard costs. Figure 130 shows how this has been done from the information detailed on Figures 127, 128, and 129. These standard costs will be used during the coming budget year for crediting the correspondence department and charging the customer department. The standard costs are submitted to the customer departments as prices at which correspondence department services can be purchased during the coming year. Each customer department then proceeds to determine the anticipated correspondence division cost that will be charged to it, by multiplying its own estimates of volume to be handled by the unit prices of the correspondence department.

In starting the cost records for the new year, the standard unit costs and the production standards are entered on the top line, in the respective columns, as shown on the pay-roll analysis in Figure 131. Based on an analysis of time cards and production records, the actual figures are computed each month and entered on the cost records, thus enabling the operating executives to obtain ready comparisons between predetermined performance standards and operation results. Similar pro-

# STANDARD COST COMPUTATION

Cost Item	Class of Letters				Form Paragraphs		Dictated Letters	
	Form Letters		Fill Ins					
Pay roll	A	B	A	B	A	B	A	B
Oper. A—Sort .....	\$11.90	\$11.90	\$11.90	\$11.90	\$11.90	\$11.90	\$11.90	\$11.90
Oper. B—Look up .....		25.00		25.00		25.00		25.00
Oper. C—Assign .....		22.70		22.70		22.70		22.70
Oper. D—Dictate .....								
Oper. E—Proof and sign .....		2.50		4.15		4.15		50.00
Oper. F—File .....	2.50		2.50	2.50	4.15	2.50	4.15	4.15
Total wage .....	\$14.40	\$62.10	\$41.25	\$66.25	\$18.55	\$66.25	\$68.55	\$116.25
Other variables (1)								
Stenographic cost .....			\$9.50	\$9.50	\$40.86	\$40.86	\$45.00	\$45.00
Postage, telephone and telegraph .....	\$22.50	\$22.50	22.50	22.50	22.50	22.50	22.50	22.50
Supplies .....	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88
Repairs and maintenance .....	.52	.52	.52	.52	.52	.52	.52	.52
Sundry expense .....	26	26	26	26	26	26	26	26
Total other variable .....	\$29.16	\$29.16	\$38.66	\$38.66	\$70.02	\$70.02	\$74.16	\$74.16
Total variable .....	43.56	91.26	79.91	104.91	88.57	136.27	142.71	190.41
Total fixed (2) .....	3.60	15.53	10.31	16.56	4.64	16.56	17.14	29.06
Standard cost .....	\$47.16	\$106.79	\$90.22	\$121.47	\$93.21	\$152.83	\$159.85	\$219.47

Note—(1) Based on number of letters—1,920,000; (2) Based on pay roll of \$104,000.

Fig. 130.—Standard Cost Computation.

# COST RECORD, CORRESPONDENCE DEPARTMENT

Month	Number Units	Pay roll Cost	Number of Hours	Production Per Hour	Wage Cost Per Hour	Wage Cost Per M Units
Standard	.....	.....	.....	42.0	\$0.50	\$11.90
January	181,000	\$2,163.15	4,414.6	41.0	.49	11.95
February	172,000	2,000.00	4,000.0	43.0	.50	11.62
March	164,000	2,018.14	3,858.9	42.5	.52	12.30
April	158,000	1,843.33	3,761.9	42.0	.49	11.65
May	.....	.....	.....	...	....	.....
June	.....	.....	.....	...	....	.....
July	.....	.....	.....	...	....	.....

Fig. 131.—Cost Record, Correspondence Department.

cedures are followed in the cost analysis book in regard to stenographic costs, other variable costs, and fixed expenses.

The accounting department opens the necessary accounts on the ledger and makes its charges to each account. The distributions in the cost books are balanced monthly against the book charges. Credit is given the department for work done on the basis of standard costs, and corresponding charges are made to the customer departments. The credits to the correspondence department are broken down into variable and fixed credits, based on the volume of work handled and the tabulation of standard costs, which includes a total variable cost per unit of work and a total fixed cost per unit of work. By comparing the amount of variable credit with the amount of variable costs incurred, the efficiency of the operations may be judged.

### Monthly reports.

Another method of preparing an accounting statement would be to multiply the actual volume figures by the detailed unit cost figure allowed for each type of work, and thus obtain the total amount allowed for each account, as shown in Figure 132. By following such a procedure, it is possible to determine not only the over-all efficiency of departmental operations, but also the cost items that represent losses and those that represent profits, based on actual volume handled.

It is quite desirable to show, on the monthly accounting statements, figures for the month, as well as cumulative figures for the year. If the same plan of presentation is followed as in Figure 132, a statement similar to the one shown in Figure 133 may be secured. Such a statement enables the management not only to determine the operation results for the month, but also to judge trend developments as revealed by the cumulative columns.

The office manager is now in a rather enviable position when he answers management inquiries. By referring to the accounting and cost accounting records, the causes for profits and losses are readily revealed and indicate quite definitely items requiring his particular attention. If, in conjunction with the cost accounting distribution, time and production figures are compiled by individuals, which can readily be done, he can even allocate causes for profits or losses to individual operators when questions concern the pay roll.

Any plan such as this naturally requires a considerable period for complete development and installation. As the use of the

# ACCOUNTING STATEMENT, CORRESPONDENCE DEPARTMENT

	Budget	Actual	Over+
			Under—
Pay roll .....	\$104,000.00	\$112,000.00	+ \$8,000.00
Stenographic department charge .....	31,525.00	29,178.00	— 2,347.00
Postage, telephone and telegraph .....	43,200.00	39,500.00	— 3,700.00
Supplies .....	11,290.00	10,800.00	— 490.00
Repairs and maintenance .....	1,000.00	900.00	— 100.00
Sundry expense .....	500.00	600.00	+ 100.00
Total .....	\$191,515.00	\$192,978.00	+ \$1,463.00
Fixed pay roll .....		7,000.00	
Operation control charges .....		5,000.00	
Personnel charge .....		4,600.00	
Rent, light and heat .....		4,437.00	
Depreciation, insurance and taxes .....		5,900.00	
Total .....	\$26,000.00	\$26,937.00	+ \$937.00
Grand total .....	\$217,515.00	\$219,915.00	+ \$2,400.00

Fig. 132.—Accounting Statement, Correspondence Department.

# CORRESPONDENCE DEPARTMENT

MARCH

	This Month			Accumulative		
	Budget	Actual	Over— Under—	Budget	Actual	Over— Under—
Pay roll .....	\$9,760.00	\$9,560.00	—\$200.00	\$28,100.00	\$30,120.00	+\$2,020.00
Stenographic department charge...	2,658.44	2,480.13	— 178.31	8,380.57	7,878.06	— 502.51
Postage, telephone and telegraph...	3,690.00	3,442.50	— 247.50	11,632.50	10,935.00	— 697.50
Supplies .....	964.32	899.64	— 64.68	3,039.96	2,857.68	— 182.28
Repairs and maintenance .....	85.28	79.56	— 5.72	268.84	252.72	— 16.12
Sundry expense .....	42.64	43.50	+ .86	134.42	144.42	+ 10.00
Total .....	\$17,200.68	\$16,505.33	—\$695.35	\$51,556.29	\$52,187.88	+\$631.59
Fixed Pay roll .....		\$583.33			\$1,750.00	
Operation control charges .....		416.67			1,250.00	
Personnel service .....		383.33			1,150.00	
Rent, light and heat .....		380.00			1,150.00	
Depreciation, insurance and taxes..		416.67			1,250.00	
Total .....	\$2,083.33	\$2,180.00	+\$96.67	\$6,250.00	\$6,550.00	+\$300.00
Grand total .....	\$19,284.01	\$18,685.33	—\$598.68	\$57,806.29	\$58,737.88	+\$931.59

Fig. 133.—Correspondence Department.

plan is intensified through education of supervisors and through a systematic collection of recorded comparative figures, the company has found it practical to put additional departments and divisions under this type of control. Ways and means are devised to obtain greater accuracy in the basic data being gathered for cost analysis purposes.

### Education of supervisors in cost analysis and control.

During the first two years, efforts were concentrated largely on the development of the plan and the accumulation of cost data. The most important progress made during the last year has been the training the supervisors have received in cost analysis and control. A cost plan may be perfect from the standpoint of providing effective data, but if these data are not used, they are worthless. The supervisors must be trained in the use of the resulting figures, be sold on their accuracy, and understand what action should be taken under various conditions.

This training program has consisted of three activities:

1. During the summer regular class work was conducted for clerical supervisors covering such points as:

- a. Principles of costing necessary to understand the plan.
- b. The routine of the costing procedure.
- c. Supervisors' responsibility in carrying out the routine.
- d. Supervisors' responsibility in improving the plan.
- e. How to analyze cost statements:
  1. What conclusions can be drawn.
  2. What further investigations should be made, and how.
  3. What action should be taken to carry through findings.

2. Supervisors were required to submit a sufficient number of analyses of their own cost statements, until they showed they had mastered the technique in a satisfactory manner.

3. Periodical meetings of supervisors and the costing division executive were held for the purpose of discussing costing procedure, developing proper coöperation between supervisors and the costing division, and increasing interest in methods of improving the plan.

### Summary of results and limitations of the plan.

Very few installations in our clerical organization have had such far-reaching results as the costing plan. Due to many other improvements made during the same period, such as scheduling, time and motion studies, procedure analyses, and so on,

it is extremely difficult to determine the dollar-and-cents value of the cost control plan itself. A short time ago a check-up made of the work done in the largest single clerical unit showed that the same volume was handled with 25 per cent less help than a year ago. To what extent the costing plan has been responsible for this showing, no one can tell, but there is no doubt that it is one of the major causes.

The office manager and his supervisors now recognize the value of the executive tool represented by this cost control plan and would not consider doing without it. Through it, the office manager's position is materially strengthened. By a rational distribution of clerical costs to the major departments served, he can definitely point out his share in producing results for the company in terms that will be understood by his chief.

Standard costs identify the nature of the clerical products in a way that can be visualized more clearly. By comparing standard costs for years past, the office manager can show how these products have been sold at decreasing prices, owing to greater efficiency. By referring to the accounting statements, the operating results can be seen in terms of profit or loss, terms that do not need any definition to his superior. If any questions as to operating results are raised, the detailed cost records will allocate the detailed causes.

Cost control supplements other controls and makes them more effective. It defines purpose and ascertains accomplishment in terms of purpose. It improves the organization morale when built on existing divisions of responsibility; it strengthens the will and determination of progress by determining goals for effective accomplishments. Such a plan is definitely an integral part of scientific office management.

Such a cost control plan as has been described does not of course have any application in some companies, and in certain departments of most companies. This may be because of lack of volume, lack of ability on the operating executive's part to make use of such a plan, lack of other controls through which such a plan could be made effective, defects in the organization line-up, or the fact that standardization has not been carried far enough to permit the successful operation of such a plan. In the average-sized organization, departments, such as accounting, personnel, methods, scheduling, and so on, as a rule do not warrant a plan of the type described—primarily, because of the multitude of operations handled by each clerk. Such units, however, as central stenographic, central filing, correspondence, order handling, and so on, are usually big enough to warrant



such a plan, provided of course that proper executive ability and adequate supplementary controls are available, and that the work is correctly organized. In departments that are not big enough, or not fitted for this type of cost control, the usual plan which gives totals only is the only means by which costs can be controlled. A more elaborate procedure in a department of this kind quite obviously would be impracticable.

**Practices of the Procter and Gamble Company.** The methods used by the Jewel Tea Company and the Meredith Publishing Company illustrate what is involved in the complete analysis and budgeting of clerical costs. While these procedures have much to commend them, many companies have been able to effect worthwhile economies—which is after all the primary purpose of all cost control plans—by the use of somewhat more simple methods. The procedure and experiences of the Procter and Gamble Company illustrate what can be done along such lines.<sup>4</sup>

This company has not found it practicable to charge each department for space, based upon the number of square feet occupied, because hallways, aisles, rest rooms, and locker rooms immediately become the subject of controversy. Instead, the total amount of rent paid and other items such as janitor service, towel service, light, and so on, have been grouped together in a single gross rent account. This amount was then allocated to the various departments, not on the number of square feet occupied, but on the number of desk units in each department. The total number of desks were counted. Other items of furniture were reduced to the equivalent of a desk; for example, five sections of filing cabinets, and twenty drawers, were considered the equivalent of one desk. The gross rent figure was divided by the total number of desk units to arrive at a unit cost per desk unit. Each department was charged with the number of desk units within and used by that department, at the average unit cost.

When the furniture and equipment were first inventoried many items were found, such as special tables which certain depart-

<sup>4</sup>Berni, I. J., "Operation of the Expense Budget in the Procter and Gamble Company," *Annual Proceedings*, pp. 120-124. National Office Management Association, 1932.

ments insisted upon retaining, as well as other items of equipment which occupied considerable space. When the departments learned that they were going to be charged with rent for those items, however, they considered their value from a different angle. For example, one department manager was told that the inactive files he insisted on keeping for reference purposes were occupying space that was worth approximately \$100 a month, and that his department was going to be charged with this amount. This man immediately made it a point to find other means of securing the information he occasionally required, for he could not justify the \$100 monthly charge. As a result, practically all of these files were destroyed, and the space thus released was made available for other tenants.

The same thing is true with depreciation on furniture and equipment, for which the departments also are charged. Each department receives immediate credit on its operating expense statement whenever it releases space, turns in a piece of equipment, or in any way contributes to a lower cost, even though the company cannot immediately avail itself of the saving. In some cases the equipment is taken into central storage and made available for another department that may need it, thereby saving the purchase of that same piece of equipment at a later date.

### Budget procedure.

The cost of operating the budget is kept down to an absolute minimum in this company. The administration of the budget is in itself an effective factor in controlling expenses. The additional clerical work involved in breaking down the entries on the general books, listing these entries by departments, and then notifying the departments of accomplishments once a month, if properly organized, can be kept to a very small figure. In fact, the budget may replace other reports and records being compiled for control purposes, so that in reality there is no additional work. The company did not employ even one additional clerk when the budget was installed.

In the operation of the budget a code number is assigned to each department, and another number for each class of expense. Thus, if the office manager's department had been assigned code number 8, and traveling expense as a classification of expense had been assigned code number 3, then 8-3 would signify that the office manager's department was to be charged with a given traveling expense account. At the end of the month the expenses are charged to the various departments and classes by

means of the tabulating cards, which are prepared from the vouchers.

Expenses of each department are broken down under the following headings:

- a. Salaries
- b. Traveling expense
- c. Rent
- d. Depreciation on office furniture and machines
- e. Rent and repairs on office furniture and machines
- f. Telephone—local
- g. Telephone—long distance
- h. Telegraph
- i. Printing and stationery
- j. Postage
- k. Mercantile agency reports
- l. Contributions, memberships, subscriptions
- m. Central transcribing
- n. Central filing
- o. Cross charges from other departments
- p. Miscellaneous office expense
- q. Total

There is also a "General expense" account, in which are included items not chargeable to any one department, such as legal and corporation expenses, taxes, credit losses, employee insurance, and so on.

The following accounts are treated as though they were separate departments for the accumulation of expense items during the month, and the totals are distributed to the other departments:

- Rent
- Depreciation on office furniture and machines
- Telephone—local
- Printing and stationery
- Central transcribing
- Central filing

The procedure followed in handling the various expense accounts is as follows:

*Salaries.* These are charged from the pay-roll records and include all salaries paid.

*Traveling expense.* This is merely an accumulation of expense vouchers by departments.

*Rent.* This includes cost of space, light, and electric power, janitors' and cleaners' salaries, janitors' supplies, towel service, and so forth. Rent is treated as though it were a department

to which are charged all expenses during the month. Once a month the office manager prepares a statement charging each department with its proportion of the rent, based upon the number of desk units at the average cost per desk unit, as previously explained. This statement is submitted to the treasurer, who prepares the budget record.

### **Depreciation on office furniture and machines.**

This is merely a breakdown of the amount included in the profit and loss statement. The company does not have a special depreciation account for each item of furniture or each office machine; therefore the method of distributing this is rather arbitrary but quite satisfactory. From an inventory of the furniture and equipment the proportion which each department bears to the total is calculated, figuring everything at replacement value. Each department is then charged with its proportionate share of the depreciation. In calculating depreciation it is arbitrarily assumed that office machines should be subject to twice as much depreciation as office furniture, as their anticipated life is obviously much less. The office manager, who has the inventory record, also prepares the statement showing the depreciation charges made to the various departments and forwards it to the treasurer to be used in distributing the total depreciation.

### **Rent and repairs on office furniture and machines.**

This is merely an accumulation of the bills paid during the month.

### **Telephone—local.**

All expenses, such as rental on switchboard and all other equipment, salaries of operators, rent for space occupied, and so forth, are first totaled. This amount is divided by the number of telephones in use in the entire office to secure an average cost per station. Each department is then charged with the number of stations within the department at the average cost per station. This statement is also prepared by the office manager and submitted to the treasurer.

### **Telephone—long distance.**

The long-distance telephone bill for the month is distributed according to the departments placing or receiving calls.

### Telegraph.

The telegraph bill for the month is distributed according to the departments sending or receiving the messages. With both the telephone and the telegraph a statement showing charges against each department is prepared at the telephone and telegraph desks, and this statement is attached to the telephone and telegraph bills when they are sent to the treasurer's department for payment.

### Printing and stationery.

This expense is also treated as though it were a separate department. The cost of all printed forms and stationery is charged to this account. Each department is charged with the forms and supplies requisitioned during the month. A physical inventory is taken once each year to adjust the printing and stationery master account.

### Postage.

No attempt is made to distribute this account accurately, but all large runs are charged against the proper department. The balance, which includes the regular general company mail, is carried on the budget of the office manager.

### Mercantile agency reports.

These charges are accumulated from the bills paid.

### Contributions, memberships, and subscriptions.

These charges are also determined from the bills as paid.

### Central transcribing.

This account is treated as a department for the accumulation of such charges as salaries of operators, rent of space occupied, depreciation on equipment, stationery, and supplies used, and so on. The total of these charges is divided by the total number of working hours for all employees in the department to secure an average cost per hour. While the salary of the supervisor is included in the cost, the supervisor's time is not included in the total. A record is kept of the number of hours of work done for each department, and at the end of the month the total hours are multiplied by the average cost per hour to determine

the charge against each department. A statement is prepared by the office manager and submitted to the treasurer.

### Central filing.

While this department has been discontinued, the same procedure was followed as in the case of the central transcribing division.

### Cross charges from other departments.

When work is performed by one department for another, the department doing the work is credited and the department for which the work is performed is charged at an average salary per hour. Inasmuch as each department is naturally eager to reduce its expense and take advantage of any slack time which

EXPENSE STATEMENT PERFORMANCE VS BUDGET														
Department	Fiscal Year Ending													
	Yearly Bud- get	Month- ly Bud- get	July	Aug.	Sept.	Ex- penses to Date	Bud- get to Date	Balance to spend Month- ly	Oct.	Nov.	Dec.	Ex- penses to Date	Bud- get to Date	Over or Under Spent
Salaries (Supervisory)														
Salaries (General)														
Traveling Expenses														
Rent														
Depreciation Office Fur- niture and Machines														
Rent and Repairs Office Furniture and Machines														
Telephone (Local)														
Telephone (Long Dist.)														
Telegraph														
N. Y. Private Wire														
Printing & Stationery														
Postage														
Mercantile Ag'cy Rep'ts														
Contributions, Member- ships, Subscriptions														
Central Transcribing														
Central Files														
Cross Charges														
Misc. Office Expense														
Total														
Number of Units														
Unit Cost														
No. of Employees														

Fig. 134.—Expense Statement.

may occur, this plan has been helpful in encouraging coöperation between departments, with the result that total company expense is reduced. The office manager acts as the clearing point for the requests for additional help.

### **Miscellaneous office expense.**

This includes the few miscellaneous items that are not classed under any one of the previous headings.

**Summary.** Measuring clerical costs and budgeting office expenses are matters in which every progressive office manager should take an untiring and vital interest. In some cases, to be sure, particularly in smaller concerns, complete and detailed analyses of costs may not be needed. Whatever the situation may be, however, it is obvious that until the office manager is able to prove conclusively, by facts and figures, that his is an efficiently and economically conducted department, he is in a vulnerable position. Only after he has put his own house in order should he suggest the adoption of cost-reduction programs and the installation of better management methods elsewhere.

## CHAPTER XXI

### *The Selection of Office Employees*

It is almost trite to point out to the practical office manager and to the student of business the fact that at no time in the past twenty years or more has the matter of employer-employee relations been more important than it is today. The many activities usually referred to as personnel administration, which are carried on by business organizations, the growth in the strength of labor organizations, and the activities of the federal and state governments in the field of social security, all illustrate how important are the developments in this field.

Obviously it is not possible to cover here the whole field of industrial relations. The discussion therefore will be confined to those phases of personnel administration with which the office manager is usually concerned—namely, employee selection, employee training, compensation, and other personnel activities. Each of these four subjects is discussed in this and the three chapters which follow.

#### **Need for a personnel department.<sup>1</sup>**

Modern industry has become so complex and so spread out that the former personal relationships which existed between the employer and his employees are no longer possible. With the growth of modern business has come, along with other mass movements such as mass production, mass distribution, and mass selling, mass personnel or industrial relations.

Personnel work deals with the minds and motives of men. Its problems are involved because of the many unknown quanti-

<sup>1</sup> Adapted from Bush, George F., "Functions of the Personnel Department," *Personnel*, American Management Association.



ties entering into the equation, and their solution is as complicated as the human element itself. A thorough, systematic, and continuous study of the wants and needs of men is absolutely essential to the proper and intelligent administration of personnel problems.

### Organization for personnel administration.

The medium through which personnel work is carried on may vary as the type of management organization varies in different concerns, but there should be, and there must be in every large company, a definite unit of organization having charge of this important function. Long before the modern concept of personnel work took root, industry recognized the value of employee good will and attempts were made to set up "welfare" organizations. These attempts usually centered around health or medical work, safety work, recreation, mutual benefit associations, profit-sharing plans, legal aid, and so forth. Usually these functions were administered by line executives or foremen, working independently of each other and reporting separately to the general manager, the president, or other officers.

When these officials have time to supervise adequately such activities, this may be a fairly satisfactory arrangement. But as the size of the organization increases and the demands upon its officers multiply, this type of organization becomes so spread and so diversified that it fails to meet the needs for which it was originally planned.

Good business sense dictates that management is entitled to the degree of coördination in its personnel program that it has in its sales policy or its production policy. This coördination can only be secured by the appointment of a director of all personnel activities.

The director of personnel work acts essentially in a staff capacity. He should be responsible for the initiation of industrial-relations policies, with of course, the approval of the management, and for keeping the management informed regarding new developments in its own organization and in the field of personnel work as a whole. While the responsibility for specific results under any personnel program must rest fairly on the line organization, it is the duty of the personnel manager to see that line executives give the same attention to them that is given to other factors, such as machines and materials. It is absolutely essential that all major and minor executives be well versed in the elements and principles of the company's personnel policies.

### Function of a personnel department.

Companies which have concentrated responsibilities for employment, education, promotion, and general welfare of the company personnel in one man, usually delegate the following duties or responsibilities to him:

1. *Policy.* Assist management in the foundation of general underlying policies of personnel administration.

2. *Employment.* Supervision over and approval of all employment for all departments, including selection and hiring. This includes:

- a. Development of sources of supply.
- b. Selection and follow-up of references of applicants.
- c. Development of waiting lists of available applicants for quick replacements in force.
- d. Job analysis, to determine and define duties and responsibilities of each position.
- e. Job specifications, to show the qualifications and qualities necessary to fill each position.
- f. Interviewing, including mental and aptitude testing, of all applicants for employment.
- g. Physical examination of all new employees.

3. *Records.* Keeping adequate and accurate records of each employee, showing experience, promotions, performance, attendance, etc. Turnover records, personnel reports and records should be kept available for the use of department heads. The personnel manager also is responsible for handling requests for confidential information regarding both present and former employees, as well as for general correspondence relating to personnel matters.

4. *Welfare.* Direct responsibility for administration of those plans and activities which are intended to improve and promote the health, progress, contentment, and happiness of employees, including:

- a. Sickness and accident insurance and compensation.
- b. Life insurance.
- c. Vacation policy.
- d. Service awards for long-time employment.
- e. Home or nurse service.
- f. Social and recreational activities.

5. *Education.* Carry on training on the job in order better to equip employees for more efficient performance of present duties and for future development and promotions, including:

- a. Support of city night schools and special part-time classes.
- b. Training courses for supervisors.
- c. Special classes for groups of employees in different departments.

- d. Suggestion systems and rewards for acceptable suggestions.
- e. Company paper or magazine.
- f. Publication and distribution of bulletins and pamphlets acquainting employees with policies and practices of the company in carrying on its work.

6. *Research.* Constant study of the policies and practices of other companies so that the management may be informed of new developments in the field of industrial relations. Salary studies, efficiency tests, and fact finding on all phases of personnel problems constitute an important part of such research work.

### Indirect or advisory responsibilities.

1. *Promotions and transfers.* Conferring with the line executives regarding the transfer and promotion of employees, both as to salary and position, including:

- a. Establishing regular lines of promotions and transfers.
- b. Studying salary scales and establishing rates.
- c. Performance and ability records as basis of promotion and transfer.
- d. Transfer between departments.
- e. Developing junior executive talent and preparing them for future positions through training and supervision.
- f. Personal interviews with employees regarding their future development and positions.
- g. Separations and discharges, safeguarding the interest of employees and trying to save those who are worthy, but perhaps misplaced, in whom the company has both an interest and an investment.

### 2. *Working conditions:*

- a. Constant study and improvement of working conditions.
- b. Follow-up and adjustments of misunderstandings and grievances through regular organized channels.
- c. Adjustments under state workmen's compensation laws.
- d. Health service.
- e. Financial assistance to employees to meet emergencies.
- f. Thrift and general welfare plans, such as stock purchases, savings funds, etc.
- g. Development of personal contact between executives and employees to the end that plans and policies may be better understood and therefore better results obtained.

**Steps involved in hiring a new employee.** Hiring a new office employee for either permanent or temporary work involves much more than merely selecting one applicant

from those who are available. The steps that must be taken may be summarized as follows<sup>2</sup>:

- Receive requisitions for employees.
- Insert advertisements and approve bills.
- Give requisitions to employment agencies.
- Read replies to advertisements, select promising candidates, and ask them to call.
- Interview applicants, both scheduled and casual.
- Give mental tests.
- Arrange for physical examination.
- Write to unsuccessful applicants.
- Place promising candidates on the reserve list.
- Investigate references.
- Introduce new employees into their department.
- Notify cashier of new employees.
- Prepare folder for new employee.
- Fill out qualification card.

**Job analysis and specifications.** As just indicated, the first step in the employment process is the receipt of a requisition or request for an employee. When such requests are for routine clerical workers or when they cover positions for which the requirements are well known, reference is often made to previously prepared job analyses and specifications.

As the name implies, the job specification consists of a detailed and specific statement of the nature of the position and of the personal qualifications and characteristics that one who probably would be successful in the position should have. Thus, such items as a detailed list of the duties of the position, educational requirements, age, sex, physical qualifications if any, starting salary, maximum salary, promotional opportunities, and other pertinent factors, which together comprise the main points of the job, are set down. One of the principal purposes of preparing job specifications is that the person interviewing applicants can have a definite standard by which to judge the ability of the various prospective employees.

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<sup>2</sup> Haman, F. P., "The Organization and Management of an Office Personnel Department," p. 34. *Annual Proceedings*, National Office Management Association, 1930.

# JOB SPECIFICATION CARD

Job Name \_\_\_\_\_ Job. No. \_\_\_\_\_ Date \_\_\_\_\_

Previous Experience Required: \_\_\_\_\_

Special Training: \_\_\_\_\_

Education or Equivalent:		Required		Desired	
Grammar School		6	7 8	Grammar School	6 7 8
High School		1	2 3 4	High School	1 2 3 4
College		1	2 3 4	College	1 2 3 4
Corr. or Tech.		1	2 3 4	Corr. or Tech.	1 2 3 4

Personal Characteristics:

Accuracy	Dependability	Judgment	Observation	Strength
Analysis	Executive Ability	Memory	Penmanship	Tact
Cooperation	Initiative	Neatness	Speed	Thoroughness

In addition, Courtesy, Energy, Good Health, and Willingness are required in all positions.

Intelligence Rating: \_\_\_\_\_ Average \_\_\_\_\_ Above Average \_\_\_\_\_ Superior \_\_\_\_\_

Sex \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_ Entrance Age Limits \_\_\_\_\_ to \_\_\_\_\_

Remarks \_\_\_\_\_

Fig. 135.—Job Specification Card (Front).

Description of Duties		Time Req. to Learn				
Machines Operated						
Nature and Condition of Work:						
Supervisory	Varied	Meeting Public	Eye Strain			
Clerical	Routine	Meeting Employees	Nerve Strain			
Posture:		Standing	Sitting	Stooping	Walking	Reaching
Salary: Minimum Rate		Maximum Rate				
Step Rates	6 mos.	1 yr.	2 yrs.	3 yrs.	yrs.	yrs.
Method of Payment:	Hour	Week	Month	Bonus	Piece	
Hours:	Regular	Irregular as Follows				
Line of Promotion:	(Ordinarily)	From	To			

Fig. 136.—Job Specification Card (Back).

Figures 135 and 136 illustrate job specifications used by one well-known office organization.

**Methods of preparing job analyses and specifications.** The preparation of job specifications is a considerable undertaking, especially if all clerical and junior supervisory positions in the organization are to be covered. Such work, however, is one of the important personnel responsibilities of the office manager. The following paragraphs indicate in some detail the procedures followed by two companies in preparing job analyses and specifications.<sup>3</sup>

### Company A.

In this organization job analysis and classification activities are conducted by a committee on personnel, composed of the general office manager and the heads of eight departments. Included among these eight department heads are the managers of the planning department and the employment department. The committee classifies all positions on the general pay roll into grades and is responsible for assigning a fair and equitable salary range for each grade.

The planning department gathers and prepares such facts and information for the consideration of the committee as may be requested, including the following:

a. *Determination of the nature of the position.* A summary of the duties and responsibilities of the position, as detailed as necessary to give a true picture, is prepared in the form of a position specification. It is drawn up by an investigator from the planning department in an interview with the man who holds the position or with someone else who knows the details of the job. The completed specification is always referred to the supervisor, division chief, or department manager for approval and recommendations.

b. *Comparison with other positions in the organization.* The specification is then turned over to another member of the staff who compares the position with other positions in the organization which are similar to it. For example, an adjustment clerk is compared with other adjustment clerks in the same department or in other departments, a stenographer with other stenog-

<sup>3</sup> *Job Analysis Methods in the Office.* Policyholders Service Bureau, Metropolitan Life Insurance Co.

raphers, a ledger clerk with other ledger clerks, and so on. The analyst then indicates on the specification what jobs of similar kind are of the same difficulty, greater difficulty, or less difficulty, and their respective grades. This points to a tentative grading for the position in question. If the specification appears not to justify the department manager's recommendation, a further check-up is made to see that nothing of significance has been overlooked.

c. *Supply and demand statistics concerning the job.* The following information is secured from the employment division:

1. Number of persons employed for the position during the past two years.
2. Starting dates and salaries.
3. Where they came from and, if within the company, from what grade of position.
4. Salary increases while on the job.
5. Number of persons leaving the position.
6. Leaving dates and salaries.
7. Where they went to and, if within the company, to what grade of position.

These turnover and salary figures are an indication of whether the position has been satisfactorily filled within the salary ranges existing in the past. In cases where the duties and responsibilities have materially changed during that period such changes are taken into consideration and the conclusions revised accordingly.

d. *Comparison of salary ranges with outside sources of supply and demand.* Periodic and special surveys are conducted covering outside organizations, and in some cases employment agencies and other sources of supply and demand, to determine market conditions governing certain types of positions.

On the basis of the foregoing facts, the planning department proposes what it deems to be a job specification for the position in question. The members of the committee on personnel then decide on the grading of the position. In the event of a difference of opinion between the committee and the manager of a department not represented on that body, the department manager is invited to sit in the committee meeting, and by mutual exchange of ideas such differences are eliminated.

Although every position is automatically considered for reclassification once a year at the initiative of the planning department, any supervisor or division chief, through his depart-



ment manager, may request the consideration of any position for reclassification at any time.

### Company B.

The information about each employee's work is first obtained from each employee by means of a simple form known as the position description. A set of instructions covering the following items accompanies the form.

Name of employee.

Position and location.

Department, division, and section.

Department (or division) head, section (or district) head, and immediate supervisor.

Duties—daily, periodic, and occasional.

Supervision of others.

Equipment used.

Contacts with public and other departments.

### Distribution of forms.

A supply of the position-description forms is handed to each department head by the personnel manager, with the suggestion that he pass them on to his employees, asking them to fill out the forms carefully and completely. When the forms have been filled out they are returned, through the department head, to the personnel department representative who is handling the analysis.

### Revised position description.

Each form is then reviewed and edited, to condense it and make the language uniform, and the description of the position is rewritten—omitting the name of the employee. When two or more employees in a department do exactly the same work, one revised description is made to cover all of them. This results in one sheet for each position rather than for each employee. A general statement or summary of the position, formulated by the person making the analysis, is included in the revision.

The revised position descriptions are then tentatively arranged according to value of work from the lowest to the highest. In determining the value of work the following factors are considered:

Difficulty of work.

Volume of work.

Responsibility involved.  
Supervision required.  
Supervision of others.  
Knowledge, training, experience necessary.

The work is then finally checked with the department head as to the value of the work and the possibility of combining certain positions under one revised description.

When the arrangement of positions meets the approval of the department head, he initials each sheet.

**Sources of supply for office workers.** Job specifications or their equivalent give the employment manager or interviewer the specific information he needs in order to seek and interview applicants. The first step, of course, is to secure applicants. Employment managers use several sources of supply for office workers.

**Employment agencies.** A very considerable number of companies make extensive use of employment agencies, especially in large cities where there are many agencies that specialize in providing office employees. While there are certain objections to employment agencies, especially from the employee's standpoint, the writer is of the opinion that the agency provides a convenient source of supply not readily obtainable otherwise. The employment agency is a useful clearing house to which employees wishing to secure a position may go and to which employers needing applicants may come. It may be that the agencies, especially the larger ones, cannot give a great amount of personal attention to each applicant and that they are prone to send out a considerable number of applicants to a position without perhaps inquiring in enough detail as to their qualifications. Nevertheless, in the final analysis, what the employer is chiefly interested in is securing a number of applicants who have had specific kinds of experience in order that he may make the final selection from the group that presents itself.

**Newspaper advertisements.** If the employer wishes he may send for persons who have inserted advertisements

under the heading "Situations Wanted" in the newspapers, or he himself may insert an advertisement under the heading "Help Wanted." It is the writer's personal experience that both of these sources have rather serious drawbacks. Those who insert advertisements under the heading "Situations Wanted" are apt not to turn out to be wholly as they represent themselves, either in personality, experience, or training. In the case of "Help Wanted" advertisements, the number of replies received may be so numerous, particularly if the position offered is better than the average available, that it is almost impossible for the employer to make a fair selection.

Two specific cases will illustrate this point. A firm located in Chicago advertised for a stenographer at \$25 a week. Something over 200 replies were received by mail. In another case, the controller of a company wished to secure a head bookkeeper and inserted an advertisement in the Sunday edition of a leading New York newspaper. In answer to this advertisement, which was inserted but once, 765 replies were received. It is obvious that under such circumstances neither the employer nor the applicant can expect to obtain the best results.

**Friends of present employees.** Opinion is divided regarding the advisability of adopting the policy of having present employees urge their friends to apply for vacant positions in the company. Some personnel managers feel that this practice may lead to such difficulties as the formation of cliques and inner circles. On the other hand, many take the attitude that a company's best recommendation to new employees comes from present workers. One practical difficulty encountered when this method is used is that present employees may urge friends or relatives to apply for positions for which they have no real qualifications and then feel somewhat resentful if they are not employed.

This method is often used with good results, however, in connection with executive positions. When a junior exec-

utive or department head is needed, the one who is doing the hiring often asks other department heads, both in the company and elsewhere, if they know someone who would be interested in the position. In such cases recommendations by present employees are much more useful, since department heads, being older and more experienced, are less likely to recommend unqualified persons.

**Unsolicited letters of application.** A number of office managers and personnel executives feel that the best type of worker is secured, especially for positions involving some responsibility, from the ranks of those who submit unsolicited letters of application, or from those who call personally without definitely knowing that there is a vacancy in the organization. It often happens that a worker who is considering a change thinks of certain concerns for which he would like to work. Companies are constantly receiving letters from persons of this sort, and, where a vacancy exists, the practice is often followed of requesting that the applicant call for a personal interview.

**Records of previous applicants.** Almost every company maintains a file of desirable persons who have previously applied for positions, but for whom there were no positions at the time they applied. In such cases, the company writes the applicant when an opening does come, stating that a vacancy has occurred and suggesting another call. Unfortunately, many interviewers have adopted the expedient of telling such applicants that there is nothing open now, but that there may be something later, when, as a matter of fact, no intention exists of employing them at all. Consequently, experienced applicants often are skeptical as to the existence of any real opportunity.

**Pre-employment tests.** Ever since the World War an increasing amount of attention has been given to the development of tests designed to show whether the applicant is fitted, not only by training and experience, but also physically and mentally, to perform the duties of the position for which application is being made.

**Physical examinations.** Many companies require all applicants to pass a physical examination before they are employed. The chief objects and advantages of giving physical examinations, as summarized by the National Safety Council, are listed below.

*Objects.*

1. To place the worker in the occupation that suits him best.
2. To detect the presence of remediable physical defects in order to enable the worker to correct them.
3. To determine the presence or absence of serious organic disease, either of which may have an important bearing on employment selection.
4. To prevent the spread of communicable disease by the exclusion of infected persons.

*Advantages.*

1. Presents a favorable opportunity for health education.
2. Enables the early discovery of disease.
3. Makes possible the proper placement of the worker.
4. Helps to prevent or lessen the effects of epidemics.
5. Tends to reduce absenteeism, when used as a part of a health service.
6. Is a factor in lessening accident occurrence.
7. Reduces the possibility of unjust claims for injuries.
8. May increase efficiency and production through proper placements.
9. Provides a means for economic control of future medical expense.

Protection for the worker, the fellow workers, and the industry are the chief motives that should actuate the inauguration of pre-employment physical examinations. They should never be adopted solely with the idea of weeding out the unfit.

**Efficiency tests.** Efficiency tests are those given to a person trained in a given operation to see how well he can do it. Under this heading come typing and stenography, comptometer, billing-machine, and punch-card operations, and any other work for which mechanically trained people are hired. A sample of the work is given them to determine how well they do it. While tests of ability such as these have the merit of giving the applicant a practical job to do, it must be remembered that, from the applicant's

standpoint particularly, tests given in this way may be somewhat unfair, in that the applicant, being desirous of securing the position and being especially anxious to make good on this trial, may become nervous and fail to do as well in the test as she could do under normal circumstances.

**Mental alertness and aptitude tests.** Such tests are an effort to determine ability in advance of training on the job. Traits tested by this group range from physical fitness and mental ability to temperamental suitability. They are the tests by which a company attempts to avoid unprofitable training and unsatisfactory end results. In this connection it should be borne in mind that at least 90 per cent of all applicants are untrained for the particular jobs that they are to do.

The Aetna Life Insurance Company reports that it has secured two fairly definite results from the use of such tests.<sup>4</sup>

First, a mental alertness test score will predict, with an astonishing degree of accuracy, the level of work which any person can do to a degree of satisfaction that permits his continuance on the job. For example, in our use of the mental-alertness test we have three critical scores: (1) the lowest, 60, below which we will not hire for any clerical operation, since our experience has shown that a large percentage of those scoring below the minimum fail completely, and many become problem cases; (2) a score of 80, below which we will not hire if we expect the person to be promotional material for a complicated routine job; and (3) a score of 100, below which we will not hire anyone whom we are expecting to promote to a job corresponding to that of underwriter.

Second, it will predict the length of time which it will take for that person to learn the job.

**Two tests used by a western mail-order company.** A mail-order house in Peoria, Illinois, uses the following two simple tests (see Figures 137 and 138).<sup>5</sup>

<sup>4</sup> Life Office Management Association *Bulletin*, October 15, 1935.

<sup>5</sup> Bourscheidt, Paul F., "The Place of Personnel Work in Office Administration," *Annual Proceedings*, p. 28. National Office Management Association, 1930.

If the applicant tells the interviewer that she likes arithmetic, one simple test is given wherein she must multiply four sets of figures of two numbers each and add their product. The total of these columns is in no case more than \$7.00. If the applicant multiplies and totals correctly in three minutes, she is above the average. A bright girl will complete the four columns correctly in four to five minutes. Most applicants can multiply, but they cannot add correctly.

The other test consists of a list of simple words, the applicant being asked to write the antonym after each word. This test shows the girl's initiative, her handwriting, and her knowledge of

9 x 3	2 x 18	3 x 7	7 x 6
7 x 4	12 x 9	13 x 2	9 x 12
16 x 9	7 x 3	2 x 7	6 x 5
4 x 13	5 x 17	3 x 14	4 x 7
14 x 3	7 x 15	9 x 2	8 x 2
3 x 4	4 x 3	5 x 3	9 x 9
15 x 7	13 x 4	3 x 8	12 x 7
2 x 9	8 x 3	6 x 7	3 x 19
7 x 8	6 x 6	17 x 5	7 x 12
5 x 6	2 x 8	2 x 13	18 x 2
3 x 9	3 x 5	9 x 16	9 x 7
7 x 2	7 x 9	8 x 7	19 x 3

Fig. 137.—Arithmetic Test.

spelling. Some of the words listed have more than one antonym. For example, "right" can be answered "left" or "wrong." If when the applicant comes to this word, she asks which word to use, experience indicates that she never will assume much responsibility. The word "right" appears twice. A girl with initiative will answer "left" on one and "wrong" on the other. The plodder will give the same answer twice or call attention to the fact that there is a repetition. This Company has found on the average that a grade school graduate gives as an antonym to "waste," "save," a high school graduate "conserve" and a college graduate "economize." The average applicant will complete the test in three minutes. The kind of girl that they like to employ completes the test in from one and three-quarters minutes to two and one-quarter minutes.

This concern has followed up the success of these girls and,

according to the results, these tests have proved to be very reliable.

**A test in following written instructions.** The following test has been widely used as an illustration of the practical difficulty most persons have in following what are apparently very elementary written instructions.<sup>6</sup>

Draw two lines across the top of the sheet about half an inch apart and the upper one an inch from the top. Draw two lines along the whole left side in similar relation to the edge. Write

sleep.....	quiet.....	fast.....
up.....	south.....	end.....
old.....	easy.....	arrive...
bottom.....	bad.....	hard....
rough.....	right.....	dry.....
joy.....	sweet.....	full.....
east.....	waste.....	right....
rich.....	large.....	stout....
laugh.....	friend.....	lost.....
poor.....	tall.....	gain.....
heavy.....	high.....	pretty...
closed.....	dark.....	love....
yes.....	early.....	straight.
hot.....	young.....	fall.....

Fig. 138.—Word Test.

the word "United" in the upper left space, and the word "States" in the upper right space. Write a small script letter "d" upside down in the smallest space. Fold the paper three times. Write your last name on the outside.

The correct answer is shown in Figure 139.

In commenting on their experience with this test, Mr. and Mrs. Niles say:

Frequently the supervisors turned their paper upside down in

<sup>6</sup> Reprinted by permission from *The Office Supervisor*, by Niles and Niles, published by John Wiley & Sons, Inc.



order to write the small script "d." Few realized that they could write a small script "p" right side up. Many put the words in the wrong places, sometimes as a result of drawing the lines improperly. One of the most frequent errors was that the paper was folded twice (into thirds), instead of three times. Even when folded three times, several different sizes of finished product were turned out. The written instructions did not specify whether to fold lengthwise, crosswise, or both.

Instructions substantially like the above were given to three groups of supervisors in a large life insurance company. We found that five out of nineteen in the first group followed them correctly; four out of eighteen in the second group; and only one out of sixteen in the third group. The best score was made by the junior group and the poorest by the senior. Of course it

<i>United</i>		<i>States</i>
	<i>p</i>	

Fig. 139.—Correct Result of Following Sample Written Instructions.

would be unfair to generalize from one such sample, but the result is in keeping with the theory that the further up a supervisor is in an organization, the more thorough, in general, are the explanations given him and the more he uses his own head. The junior supervisors, some of whom spent most of their time doing individual work, were more accustomed than the seniors to being told to do a thing and to go ahead without knowing just why. The seniors appeared to be trying to get some reason out of the instructions, and since there was none, they had difficulty in following them.

The whole subject of tests is a large and technical one.

There is not enough space for an extended study of it in this book. An office manager who proposes to adopt such tests in his own organization should carefully consider the matter from every angle and should certainly fortify himself with the necessary knowledge regarding the principles of psychology and their application to tests of mental ability.

**Final selection.** The final step in the usual employment procedure is the selection of the successful applicant. Only in a small number of cases does the employment manager, office manager, or interviewer make the final selection. The usual procedure is for the interviewer to make a preliminary selection from among all those who apply, but to leave the final selection to the executive in whose department the vacant position exists. Thus, if fifteen persons apply for a vacant position in the bookkeeping department, the interviewer may select four or five applicants who he thinks are the best of the group and send these one by one to the head bookkeeper or chief accountant, who will interview the applicants again and make the final selection. In this way the department head is relieved of the routine work of interviewing a considerable number of persons, but at the same time he has an opportunity to make the final choice.

**A summary of employment practice.** In 1935 the Peirce School of Business Administration, at the suggestion of the National Office Management Association, conducted a survey covering the personnel practices of some 250 companies employing a total of 649,000 workers, of whom approximately 203,000 were office workers. The findings regarding sources of supply for office employees, as well as other employment practices, were as follows:

- (a) Will you employ married women?

Yes, 123 (48%)

No, 131 (52%)

- (b) Do you retain women who are married while in your employ?

Yes, 178 (70%)

For a limited time, 42 (24%)

No, 76 (30%)

Indefinitely, 136 (76%)

(c) Do you use outside employment agencies?

Yes, 130 (51%)

No, 124 (49%)

(d) Have you established a direct contact with schools or colleges for employment purposes?

Yes, 130 (51%)

No, 124 (49%)

(e) Do you use selection tests as the basis for employment?

Yes, 140 (55%)

Exclusively, 10 (7%)

No, 114 (45%)

To a limited extent, 130 (93%)

(f) Do you use tests in selecting employees for promotion?

Yes, 66 (26%)

Exclusively, 0

No, 188 (74%)

To a limited extent, 66 (100%)

(g) Do you require a medical examination of applicants before employment?

	Yes	No
For office positions?	122 (48%)	132 (52%)
For operating positions?	132 (52%)	122 (48%)

**Employment records.** The principal records that should be kept, in order that the office manager may have complete information regarding the personnel, are the following:

1. *Application blanks.* Everyone who applies for a position, regardless of whether he is employed, should be required to fill out an application blank. Considerable study has been given to the question of exactly how much and what kind of information should be given by the applicant on the application blank. However, such points as name, address, business, and home telephone, married or single, salary expected, educational record, record of previous positions held, business and personal references, reasons for desiring to leave present or last position, and so on, are among the more usual questions asked. Application blanks or cards are usually filed alphabetically by the name of the applicant. If the company wishes definitely to adopt the policy of giving applicants for whom there is no position open at the time they apply an opportunity later on to

apply for a position that is in their field of experience, it will be necessary to cross index by occupations the application blanks of those who come under this heading. Figure 140 shows an application for employment record.

NAME <i>Schneider Thos. M.</i>		NOTES BY INTERVIEWER <i>Good personality. Clean-cut Speaks French &amp; German M. M.</i>		DATE <i>5-27-</i>	
ADDRESS AND CHANGES		PHONE	FORMER EMPLOYERS	WHAT WORK	HOW LONG
<i>1946 Allegheny Ave.</i>		<i>1940-J</i>	Firm <i>Strawbridge &amp; Clothier</i>	<i>Stock</i>	
			Address <i>Phila. Pa.</i>	<i>Clerk</i>	<i>2 1/2 yrs</i>
			Firm <i>Gimbel Bros.</i>	<i>Clothing</i>	
			Address <i>Phila. Pa.</i>	<i>Sales</i>	<i>2 yrs.</i>
			Firm <i>Gimbel Bros.</i>	<i>Dist.</i>	
			Address <i>New York</i>	<i>Buyer</i>	<i>1 1/2 yrs.</i>
Sex <i>M</i> Age <i>36</i> Height <i>5'10"</i> Weight <i>150</i>		RECORD OF EMPLOYMENT, TRANSFERS, RATES, ETC.			
Single <input checked="" type="checkbox"/>	Married <input type="checkbox"/>	Widow (er) <input type="checkbox"/>	Divorced <input type="checkbox"/>	DATE	DEPT.
Live with Parents <input checked="" type="checkbox"/>	Board <input type="checkbox"/>	Rent <input type="checkbox"/>	Own Home <input type="checkbox"/>		
Dependents <i>None</i>					
Citizen of United States? <i>Yes</i> First Papers? <i>Phila. Pa.</i>					
Where Born? <i>Phila. Pa.</i>					
Education <i>High School Grad.</i>					
<i>Sheldon School - Sales</i>					
Work Preferred <i>Buyer - Clothing</i>					
Will Accept <i>Sales</i>					
Pay Expected <i>\$45-\$60</i>					
Sent For					

Fig. 140.—Application Blank.

2. *Employee's personal history card.* The employee's personal history card is a fundamental and indispensable record of present employees. When a new employee is hired, the personal history record card is started. This card provides spaces for recording the progress of the employee during his period of employment. In addition to his personal history, such as name and address, which may be copied directly from the application blank, the card provides space for showing the name and number of the department to which the new employee is first assigned, the initial salary received, changes in departmental assignment and salary that may subsequently take place, date and reasons for leaving, and so on. In addition, in cases where a company conducts employee-training classes, the personal history card should provide spaces for showing the kinds of courses the employee has taken, his grade or standing upon

the completion of the course, and so on. Furthermore, in companies that sell stock to their employees under some kind of a stock-ownership plan, where thrift or saving plans are in force, where employees serve in social activities, or where a group insurance plan is in operation, the personal

NAME		NOTES BY INTERVIEWER				DATE
<i>Schneider Thos. M.</i>		<i>Good personality. Clean-cut. Speaks French &amp; German. M.N.</i>				<i>5-27-</i>
ADDRESS AND CHANGES		PHONE	FORMER EMPLOYERS		WHAT WORK	HOW LONG
<i>1946 Allegheny Ave.</i>		<i>1940 8</i>	Firm	<i>Strawbridge &amp; Clothier</i>	<i>Stock</i>	
<i>915 No. Main St.</i>		<i>863-14</i>	Address	<i>Phila. Pa.</i>	<i>Clerk</i>	<i>2 yrs</i>
			Firm	<i>Gimbel Bros.</i>	<i>Clothing</i>	
			Address	<i>Phila. Pa.</i>	<i>Sales</i>	<i>2 yrs.</i>
			Firm	<i>Gimbel Bros.</i>	<i>Asst.</i>	
			Address	<i>New York</i>	<i>Buyer</i>	<i>1 1/2 yrs.</i>
Sex <i>M</i> Age <i>36</i> Height <i>5'10"</i> Weight <i>150</i>		RECORD OF EMPLOYMENT, TRANSFERS, RATES, ETC.				
Single <input checked="" type="checkbox"/> Married <input type="checkbox"/> Widow (er) <input type="checkbox"/> Divorced <input type="checkbox"/>	DATE	DEPT.	ACTION		WORK	RATE NO.
Life with Payments <input checked="" type="checkbox"/> Board <input type="checkbox"/> Rent <input type="checkbox"/> Own Home <input type="checkbox"/>	<i>6-1-</i>	<i>A-2</i>	<i>Hired on trial</i>		<i>Sales</i>	<i>\$45 172</i>
Dependents <i>None Wife Esther</i>	<i>7-24-</i>	<i>"</i>	<i>Promoted</i>		<i>Asst. Head</i>	<i>\$50 "</i>
	<i>1-23-</i>	<i>"</i>	<i>Pay Increased</i>		<i>" "</i>	<i>\$60 "</i>
	<i>6-21-</i>	<i>"</i>	<i>Given Chg. of Dept.</i>		<i>Buyer</i>	<i>\$75 "</i>
	<i>8-15-</i>	<i>"</i>	<i>Resigned - Sick</i>		<i>" "</i>	<i>" "</i>
Citizen of United States? <i>Yes</i> First Papers? <i>—</i>						
Where Born? <i>Phila. Pa.</i>						
Education <i>High School Grad.</i>						
<i>Sheldon School - Sales</i>						
Work Preferred <i>Buyer - Clothing</i>						
Will Accept <i>Sales</i>						
Pay Expected <i>\$45-\$60</i>						
Sent For <i>5-29 - Will report 6-1-</i>						

PERFORMANCE RECORD BY YEARS—SUMMARIZED QUARTERLY												
Year.....												
Rating.....	<i>—</i>	<i>80</i>	<i>83</i>	<i>81</i>	<i>85</i>	<i>90</i>	<i>91</i>	<i>94</i>	<i>95</i>			
Attendance.....	<i>—</i>	<i>99</i>	<i>100</i>	<i>100</i>	<i>99</i>	<i>100</i>	<i>100</i>	<i>98</i>	<i>100</i>			
Punctuality.....	<i>—</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>99</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>			
Year.....												
Rating.....												
Attendance.....												
Punctuality.....												
Year.....												
Rating.....												
Attendance.....												
Punctuality.....												
SPECIAL RECORDS AND MEMORANDA												
DATE	<i>6-15 - Suggested new lay-out &amp; display racks</i>								DATE			
<i>11-3-</i>	<i>Discovered &amp; reported thefts from stock</i>											
<i>11-9-</i>	<i>Married Esther Smith - Nation Dist.</i>											
<i>8-15-</i>	<i>Injured in auto wreck 7-4 - at Atlantic City. Sick several weeks. Decided to work out of doors for health. A #1 man. May return.</i>											

Fig. 141.—Employee's Personal History Card.



record card should provide spaces for recording this information. Figure 141 shows a complete employment-history record.

3. *Record of labor turnover.* Records of labor turnover, together with analysis of the reasons why employees leave, give the office manager the most useful and interesting sort of information regarding the effectiveness of present personnel policies, as well as the attitude of the

### MONTHLY SUMMARY

Number Hired During Month (Including Re-hires) \_\_\_\_\_

Average Number on Payroll for Month \_\_\_\_\_

Laid Off

Quit Employee Reasons

Quit General Reasons

Total Turnover (Annual Rate)

Fig. 143.—Record of Labor Turnover (Back).

employees toward the company as a whole and toward the individual situations. Figures 142 and 143 illustrate such records.

Office personnel records of the Procter and Gamble Company. The office personnel records kept by the Procter and Gamble Company not only indicate specifically the practices of this company, but also illustrate the size and

importance of the record keeping and allied office management activities involved in operating a personnel department of a large company.<sup>7</sup>

### **Authorization for a new position.**

When the department manager has determined that there is need for a new position, he must request authority for it by writing a letter to the committee on office administration, stating his reasons, and indicating the starting salary that it is expected will be paid. This formal letter frequently follows an informal discussion with the office personnel manager. The committee on office administration formally authorizes the position by writing a letter to the department manager, with a copy for the pay-roll records.

### **Requisition for personnel.**

This form, giving specifications for the job, is prepared by the department manager, and referred to the employment division. The employment division immediately starts to secure applicants for the purpose of selecting one who will answer the requirements.

### **Application form.**

Those applicants who seem desirable are given an application form to fill out. While business references are carefully investigated, wherever possible by telephone, we have rather generally discontinued requesting character references, because we have found that they do not help us in our selection.

Following up character references is an expense, and we are not convinced that the advantages justify the expense involved.

### **Test forms.**

Those applicants that appear to be particularly desirable are given certain psychological tests, which are designed to assist in the selection.

All applicants for office positions are asked to take the following tests:

<sup>7</sup> Berni, I. J., "Personnel Records, Record Keeping and Controls," *Annual Proceedings*, pp. 46-49, National Office Management Association, 1930.



- a. Mental alertness.
- b. Arithmetic.
- c. Care for detail (comparing).
- d. Spelling.
- e. Grammar.
- f. Number cancellation, which is really a coördination of speed and accuracy.

Typists are required to type a standard letter. Stenographers are given a letter, the dictation of which is at an increasing rate of speed, and after taking these notes they transcribe the letter.

The tests are graded and the scores are shown in the spaces provided. Standards vary, of course, with the positions that are to be filled.

### **Applicants referred to department manager.**

After having met all the preliminary requirements, the applicant, with all papers that have been filled out, is referred to the department manager who is to do the employing. Several applicants are frequently referred to him before he makes a decision.

### **Forms returned to employment division.**

All employment forms, including application and test forms, are returned to the employment division.

The forms of the persons employed are noted to show:

- a. Date employment is to be effective.
- b. Salary.
- c. Position to be occupied.

The forms of those not employed are filed for future reference.

### **Personnel card.**

The employment division also prepares a card for the files of the office personnel manager, which is a summary of the information on the application blank and test forms. This is the permanent master record and contains the full history of an employee during the period he is with the company. These cards are filed alphabetically by departments in a visible card file. Absences are also recorded on this form.

### **Original papers retained in employment division.**

After preparing the personnel card for the personnel manager, the original papers are retained in the files of the employment division for a reasonable period, during which time occasional studies are made for research purposes, after which they are destroyed.

### **Employment notice.**

For pay-roll purposes the department manager must send an employment notice to the treasurer as soon as employment is decided upon, showing whether the new employee is temporary or permanent, date employment is effective, position, salary, and so on. This notice is also submitted to the treasurer in the case of the transfer of an employee from one department to another, or in the case of resignation. The cashier, after making the proper record for pay-roll purposes, refers the employment notice to the office personnel manager, who checks it against the personnel card, which originated in the employment division. If the notice is a change in the status of one already employed, the records are noted to indicate the change.

### **Tickler card.**

While it is a department manager's responsibility to see that each individual is examined physically and admitted to employee welfare plans as he becomes eligible, there have been so many instances of negligence that the office personnel manager's department starts a tickler card for each new employee, and follows through to see that each employee is examined physically at the earliest opportunity. A physical examination is one of the requisites of continued employment. When employees become eligible for any of the welfare plans such as group insurance, the department managers are reminded of their eligibility. This tickler card is kept current until applications for participation in the plans are received.

### **Locker record.**

A locker is assigned to each employee and a record of the assignment is maintained in the office personnel manager's department.

### **Employee's handbook and other booklets.**

An employee's handbook is presented to each new employee, and its contents discussed in general with him. At the same time other booklets describing employee welfare plans are given to the employee, and arrangements are made for a trip of the employee through the factory.

### **Physical examination record.**

As soon as it is possible after employment, a physical examination is arranged for, generally by our own doctor, and at the time of examination he prepares a physical examination record, which becomes a part of his permanent records.

### **Hospital record.**

Our doctor is not available full time at the office, so we have a rest room and hospital primarily for the use of our girls, with a capable person in charge, who has been trained in first-aid work. She maintains a record of each girl, showing:

- a. The nature of work the girl is performing.
- b. The nature of illness.
- c. The nature of remedy applied (only as prescribed by the doctor).
- d. The disposition of case, that is, sent back to work, sent home, etc.

### **Absence record.**

Absence records are maintained in each department in a standard time book. In addition, the record of each employee is transferred to the reverse side of the employment and service record.

Once each week a record of absences is prepared for pay-roll purposes and submitted to the cashier. The notice shows whether pay is to be allowed or if an employee is to be paid from the sick benefit fund. After noting the facts on the pay-roll records the cashier forwards the absence records to the office personnel manager's department, where the absence is recorded on the employee's card. Absence records are referred to when recommended salary increases are being considered.

### **Absence statistics.**

Absence statistics by departments are compiled by the personnel manager every six months and discussed with department managers.

### **Recommendations for salary increases.**

While no hard and fast salary scale is maintained, salaries for various positions are kept in line by the central control through the office personnel manager's department, with minimums and maximums for each position generally understood.

A recommendation for salary increase originates with the department manager, who forwards it to the committee on office administration, usually conferring first with the office personnel manager, who is secretary of the committee. The work performed by the employee, his qualifications for more advanced work, his record of absence, and so on, are discussed at this time. If the department manager should overlook any employee for an unusually long time, the office personnel manager calls the matter to the department manager's attention.

When a salary increase is approved, a letter is written to the department manager, and a copy of this letter goes to the cashier, who notes it on the pay-roll records, and then forwards this copy to the office personnel manager for recording on the personnel card of the employee.

### **Miscellaneous control report and records.**

A turnover report is compiled once each year, by departments, and tabulated according to the reason given for the termination. When the record of any one department appears to be excessive, the report is discussed with the department manager. Reasons for resignations and releases are analyzed by both the office personnel manager and the employment division.

To assist the departments in determining the progress and relative value of the men who are being trained for more advanced work, several forms of rating sheets or scales are used. The value of the tests used for selection and the subsequent success of the employee on the job are checked by the employment division.

The employment division also maintains records showing:

- a. Requisitions for employees received and when filled.

- b. Number of applicants interviewed, male and female.
- c. Number of applicants tested.
- d. Number of applicants employed—broken down by departments.
- e. Desirable prospects who have not yet been placed.

## CHAPTER XXII

### *Training and Promotion of Office Employees*

The old-school point of view towards employee training was that employees should secure all their education in school and that no educational activities need be or should be carried on by the company itself beyond those that might be necessary to instruct the new employee in the details of his position. Indeed, some companies still follow this practice to a large extent.

Obviously such training is inevitably of the hit-or-miss kind. The new employee first spends a short time listening to the department head explain the work of the department. He is then given a desk and some work to do and told that the person next to him will answer any questions he may want to ask regarding the way in which the work is to be done. The result of such a haphazard plan is that the employee makes many unnecessary mistakes and acquires information regarding the duties of his position in a most unsystematic manner.

Today progressive firms realize that such methods are extremely wasteful. As a result, organized training for office employees is regarded as a fundamental and essential part of a well-balanced and thorough personnel program.

In the survey of current personnel practices made in 1935 by the Peirce School of Business Administration, in cooperation with the National Office Management Association, it was found that 31 per cent of all companies queried had company-conducted classroom training for office employees.

**Advantages of training office employees.** The advan-

tages of organized training for office employees, particularly that in which the principal emphasis is on training clerks to do their present jobs better, may be summarized as follows<sup>1</sup>:

The clerk becomes more accurate and works faster.

Methods of different clerks are standardized.

The clerk is prepared for promotion.

A trained clerk requires less constant and detailed supervision.

Good habits are inculcated.

Training will often provide clerks who can act as substitutes when others are absent.

Training fulfills a moral obligation to develop subordinates.

Training promotes coöperation and teamwork.

Definite training develops clerks much faster than the trial-and-error method of letting them find out for themselves how to handle the work.

Training gives a better basis on which the clerk may exercise his judgment.

Training will often make handling of details practically an automatic process.

Training will teach clerks to recognize unusual cases more easily and to give special attention to them.

In the process of training, the teacher can learn a great deal about the capacity of the clerk.

Trained clerks take more interest in their work.

As a result of the above factors, training reduces costs.

**Disadvantages of training.** Offsetting the above advantages are a number of disadvantages. Some or all of these may be present in any given cases.<sup>2</sup>

Training requires the expenditure of time and money.

During the period of training, regular work is likely to be interrupted so that the output of the clerk is reduced.

It is often difficult to get a good teacher, and a poor teacher may do as much harm as good.

If a clerk is trained he may feel that he is capable of doing a better job, and may become dissatisfied unless he is advanced promptly.

<sup>1</sup> Reprinted by permission from *The Office Supervisor* by Niles and Niles, published by John Wiley & Sons, Inc.

<sup>2</sup> *Ibid.*

If a clerk leaves soon after the training period, the company loses most of what it invested in his training.

If a new clerk is trained he may take the job of an older clerk or even that of the supervisor.

Training may perpetuate poor or mediocre ways of doing a job, while an able clerk might work out short cuts if he were not misled by poor training.

**Types and methods of employee training.** Three principal kinds of employee training methods are commonly found:

First, there is training for new employees. Such work consists primarily of instructing the new employee specifically regarding the nature of the work to be done and the way in which it is to be done. Second, there is promotional training, which is designed to train present employees for the job ahead. Third, there is employee training of a more general nature, which is usually given to supervisory and executive forces.

- \* Various methods are used in carrying on training work.<sup>3</sup> One is a combination of skill and information training, which is primarily dependent upon establishing the proper coördination of nerves and muscles, commonly referred to as working habits. Such coördination results largely from practice, which is the key to success in skill training. This kind of training is generally best accomplished under conditions of actual work, or under conditions that simulate the actual very closely. Its keynotes are detailed demonstration and repeated practice.

The conference method of training is also widely used. Under this plan the leader keeps in the background and attempts to draw out the salient points from his audience, supplying missing links only when necessary. He never lectures and seldom demonstrates in person. The conference method is characteristically inductive, building up to the desired point from fragments of information and by reasoning processes gleaned from the audience. It functions best with employees who are experienced in meeting the problems to be brought up for discussion. The

<sup>3</sup> Bengé, Eugene J., *Cutting Clerical Costs*, pp. 222-226. McGraw-Hill Book Co., Inc., New York, 1931.



more formal methods of education announce the point to be put across, then show its various applications.

The lecture method is widely used in educational work. It is not generally to be preferred to the two other methods, although it is virtually compulsory where very large groups must be organized, or where much new information must be presented. For example, during the World War, certain financial institutions undertook, on short notice, to float large issues of Liberty Bonds. It was necessary to convey information on a wholesale scale to employees, because the problem differed materially from the normal duties of those employees. In an instance like this, the lecture method was justifiable, but normally the method is weak and not highly productive of increased competency among employees.

In addition to the three principal kinds of training outlined above, a number of companies use other training devices such as coöperation with outside educational institutions, instruction manuals, house organs, and employees' papers. Training by the use of such methods, however, usually supplements the other more definitely organized methods already mentioned.

Points to be considered before starting employee training. Regardless of what kind of training is to be given or whether, as is sometimes the case, a company deems it advisable to give all three types, there are certain matters of policy and procedure that must be decided before a start can be made.

First, there is the question of attendance. Shall attendance by employees be voluntary or compulsory? Shall the classes be conducted on company time or on the employee's time? Voluntary attendance on the employee's time, or compulsory attendance on company time, comprise the usual combinations in use.

Second, there is the question as to the nature of the work to be given. Shall the content of the courses be general or specific? For example, a company may decide to give a course in business correspondence. It is apparent, however, that before the content of the course can be planned

a decision must be made as to whether the material is to deal chiefly with the principles of business correspondence, or whether it is to be based largely on the correspondence problems of the particular company. Similarly, in planning a course in bookkeeping and accounting, a decision must be made as to whether the course shall consist largely of the theory of double-entry bookkeeping and accounting, or whether the various accounts and specific procedures of the company are to be used as a basis.

Third, there is a question of who shall give the course of instruction. Shall company executives conduct the work, or shall outsiders (frequently teachers in local educational institutions) be engaged for the work? In this connection it is worthwhile to remember that company executives may know the work of their respective departments exceptionally well but may not have the ability to explain it clearly to others. Moreover, there is always the question of whether the employees taking the course will not perhaps feel that the executive is assuming a good deal in the way of experience and knowledge when he attempts to "lecture" to others about it. On the other hand, no outside teacher, no matter how experienced or competent he may be, can possibly know the peculiar problems and details of the company's operation in the way that the executive knows them.

Fourth, there is the question of possible coöperation with existing educational institutions. In cases where classes in various business subjects are already being given by schools or colleges of recognized standing in the community, some companies do not attempt to duplicate such work for their own employees but merely make arrangements whereby employees may enroll in certain classes as special students, the company sometimes paying a share of the tuition fee.

Fifth, if a company establishes a number of employee training courses in different subjects, the content of each course must be carefully worked out. There must be no overlapping in subject matter; rather, it should be co-

ordinated. For example, assume that a company is giving a course in stenography to typists, and that in the same organization a course in business correspondence is being conducted. The question immediately arises as to how much business English should be given in the stenographic class. This is especially likely to be a problem if all stenographers are urged to take the course in business English, in order that they may be able to write better business letters, and also to qualify themselves for positions as private secretaries.

**Training new employees for their initial work.** The problem of training new employees for their initial work involves considerable study. Mr. W. H. Leffingwell outlines the six important steps that should be taken as follows<sup>4</sup>:

1. The actual work to be done must be explained to the worker in a manner that will thoroughly impress him with (a) the purpose of the work, (b) the relation of the operation to other work, (c) the relative importance of the various details of the job, and (d) the manner in which it is to be done. This is the beginning of all training, and there are perhaps more companies which take this step than will be found taking the rest of them. But it is only the beginning, and nothing remarkable can be accomplished by stopping there.

2. The best arrangement of the work and the work place should be taught. If every job is carefully studied, it will be found that there is always one particular way of arranging the work and the work place that is far superior to others. But this is a matter which can only be determined by deliberate study; one cannot "just naturally" pick it up, and if left to his own devices the clerk will often adopt a clumsy arrangement. Many managers, though observing this, hesitate to suggest a change, on the assumption that a person will work better with his own arrangement than with any other, which is of course an unfounded idea.

3. The best motions constitute the next step, and they can only be found by the most careful analysis of the work to be

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<sup>4</sup> Leffingwell, W. H., "Training Clerical Workers on the Job," *Handbook of Business Administration*. McGraw-Hill Book Company, Inc., New York, 1931.

accomplished, the nature of the motion required, the element of fatigue, and so forth. Occasionally a worker will, of his own accord, develop a superior way of performing a certain motion, but rarely indeed does one worker develop all of the best motions in an operation. A study of the various methods used at present by different workers will be found suggestive, but ordinarily the observer will be compelled to use his own ingenuity.

4. The next step to be taught is the correct sequence of the motions at a standard rate of speed. Fast motions are different from slow ones, and if one is definitely to learn the right motions, he must at the same time learn to perform them at a standard rate of speed.

5. While the fourth step is being learned, the habit of speed must be developed. Speed is strictly a matter of habit. Some people acquire it more readily than others, but all must learn it.

6. Accuracy must also accompany the last two steps, but its final development may be completed after the habit of performing the right motions in the right sequence, and at a standard rate of speed, has been acquired. The worker must be taught the points at which accuracy is of the greatest importance, and also where extreme accuracy is not required. The meticulous clerk is often more of a liability than an asset.

**Promotional training.** The second principal type of training for office employees is promotional training. As the phrase indicates, it is designed to train present employees for the job ahead.

Various methods of promotional training are used. Courses in specific company procedure covering such activities as bookkeeping, order handling, and secretarial work may be made available to present employees who are in beginners' positions, doing mail and messenger work and general clerical activities. More general courses in such subjects as business English, salesmanship, accounting, traffic management, and credits and collections may be given by the company or offered to employees in coöperation with established educational institutions.

One of the most frequently used methods of promotional training is the understudy plan, whereby selected individuals are placed in key positions as assistants to department heads and executives. The executive makes it his busi-

ness to see that the assistant has full opportunity to learn all about his work. Periodic discussions may be held at which the executive explains the reasons why present procedures exist and why certain decisions were made in a particular way. After the assistant is thoroughly trained and experienced he is promoted, either to the position which he has been understudying or to another of equal importance in the company.

**Employee training, Metropolitan Life Insurance Company.** The Metropolitan Life Insurance Company is a leader in the field of job and promotional training for office employees. Because of this, in addition to the fact that the nature of its business is such that practically all employees, aside from the field force, are clerical workers, the methods of this company offer an excellent illustration of what may be included in a comprehensive training plan.

All training courses for office employees are given on the employees' time after office hours and without charge to the employees. Among the courses offered are the following:

*Typing.* Both group and individual instruction are given in touch typing. The student, at his own expense, purchases a copy of the *Book of Instructions*, and continues in class until able to type at a minimum rate of 100 lines per hour, with due consideration to spelling, punctuation, neatness, and general set-up.

*Stenography, intermediate class.* No student is admitted unless he or she is able to take simple dictation at 60 words a minute. Principal attention is given to increasing speed from 60 to 80 words a minute. Students are certified to an advanced class when they are able to take simple dictation at 80 words a minute.

*Stenography, advanced class.* Students in this class are admitted from the intermediate class. Dictation is given at 80 words a minute, but the subject matter is more difficult and varied. Special attention is paid to rapid and accurate transcription of notes.

*Stenography, special classes, junior.* Emphasis is placed largely on maintaining dictation at 80 words a minute, the subject matter being more difficult and varied than that given in the advanced class. Special attention is given to proper punctuation, neatness, set-up, and so on.

*Stenography, special classes, senior.* Dictation is given at 80 words a minute, with material selected from the company's dictation representing all major divisions and departments. Students are not certified as qualified stenographers until they are able to take reasonably difficult dictation at 80 words a minute, pass a spelling test made up of words based on the company's general dictation (minimum score of 90 required), and transcribe notes at the rate of 100 lines an hour, with due consideration to neatness and general set-up.

*Dictaphone.* Students are required to transcribe, on the typewriter, previously used cylinders. The transcribed material is proofread against cylinders. Qualified students must be able to transcribe at the rate of 140 lines per hour, with due consideration to spelling, punctuation, general neatness, and so on.

*Calculating machines.* Classes are organized from time to time as there is need for competent operators.

*Principles and practices of life insurance.* This class covers such subjects as tables of mortality, premiums, types of contracts, claim settlements, group and industrial insurance, reserves and surrender values, selection of risks, treatment of sub-standard risks, the annual statement, investment of assets, internal organization, agency organization, insurance regulation and supervision, insurance laws, and history of insurance.

*Business English, elementary.* The elementary class is for those without previous formal training in business English. Particular attention is paid to grammar, syntax, and so on.

*Business English, advanced.* Admission to these classes is limited to those who have completed the elementary

work, current enrollment being approximately 250. Emphasis is given to actual letter writing and composition.

*Actuarial.* For forty years the company has maintained classes in mathematics and the actuarial science for the purpose of preparing students for the examinations given by the Actuarial Society of America and the American Institute of Actuaries. Identical examinations for the first eight groups of studies are given by both the Society and the Institute, and separate classes are conducted for the preparation of each of these examinations. Classes for Parts 1 to 4, inclusive, cover principally the mathematical processes. These classes are maintained for Metropolitan students only.

**Transfer and promotion.** The principle of giving present employees the first opportunity to take positions involving larger responsibility and carrying a higher rate of pay than those which they are now holding is of course a well-established one. In order to put it into practice, however, it is necessary that there be available carefully worked out and detailed descriptions of every position in the form of job specifications, and that the records of the personnel be so arranged that the names of present employees who may be fitted for advancement may be readily available. It is also most important that a clear-cut distinction be made between a transfer and a promotion. The former word usually means merely a change from one position to another without an increase in the responsibility of the work and usually without an increase in pay. Promotion, on the other hand, means immediate advancement in responsibility and an immediate or subsequent increase in salary.

The so-called three-position plan of promotion represents the ideal method. Under it each employee—and executive—is not only doing his own work; at the same time he is both learning the job above him and training someone under him. In actual practice, however, the adoption of such a plan obviously is not always possible. Furthermore,

individual personalities necessarily play a most important part.

Further consideration will be given to the subject of transfer and promotion in connection with the discussion of salary standardization in Chapter XXIV.

**Executive training.** The selection and training of individuals who in time will be capable of holding important executive positions is a matter to which business organizations have given a great deal of attention, particularly in recent years. It is now recognized more clearly than ever that it is both unsafe and unwise to rely on the mere chance of being able to find a qualified executive when he is needed. Progressive concerns today, therefore, besides taking definite steps to locate potential executive personnel long before there is a definite position available, are giving special attention to the training which those thus chosen shall receive.

The importance of selecting and training executives was strongly emphasized by Mr. Edward R. Stettinius, Jr., Chairman of the Finance Committee of the United States Steel Corporation, in an address to the Harvard Business School Alumni Association in September, 1936. Mr. Stettinius said, in part<sup>5</sup>:

No doubt there is today, in America, an awakened and enlivened sense of the imperative necessity of finding and developing our executives in a more scientific manner. We can achieve the utmost in economies by engineering knowledge; we can conquer new fields by research; we can build plants and machines that shall stand among the wonders of the world; but unless we put the right man in the right place—unless we make it possible for our workers and executives alike to enjoy a sense of satisfaction in their jobs—our efforts will have been in vain.

Today as never before, one is not over-handicapped in the scale of promotion by the lack of long years of service with an enterprise.

Men, the prime necessity and supreme asset of any business,

<sup>5</sup> Lawrence, William L., *New York Times*, September 18, 1936.



are rarely evaluated among its assets. Granting that it is difficult to evaluate human beings with exactness, it is strange that while large organizations maintain precise inventories of physical properties and materials, men, and principally executives and leaders, infrequently enter into the formal equation.

In the old days, when the largest businesses were small in contrast with many today, then it could be said much more accurately than now that "every business is but the lengthened shadow of one man." When that man could and often did know each of his employees by his first name, a list and a list only was needed.

But today, when business enterprises are designed as self-perpetuating organizations, when their executives are frequently numbered by hundreds and their employees by many thousands, when the art of management has of necessity come to resemble navigation—by instrument largely—is it not obvious that ways and means must be found to discover and evaluate executives in accordance with pre-established standards?

I propose the establishment, under the president of an organization—either as an assistant to the president or as a vice-president—of an officer in charge of executive personnel.

The responsibilities and duties of such an executive officer would be something along the following lines:

First, to maintain a complete progressive record of all employees, actually or potentially eligible for rating as executives. Among other things, the record should include the individual's educational history; his record of employment before joining the organization and with his present employer; a complete salary record; a periodic systematic rating by his immediate superiors and the executive personnel officer; a detailed description of his physical characteristics and social status, as well as a health history currently maintained by periodic physical examination.

Second, to maintain organization charts on which would be registered all eligible executives qualifying for this special analysis.

Third, to develop lines of promotion whereby opportunities for advancement would be company-wide in every department of the business.

Fourth, to prepare and maintain job specifications for all positions on a specially prepared organization chart and to insure that qualified understudies are in training for promotion to those positions.

Fifth, to make available information concerning courses of

study, books, periodicals, and other activities of an educational nature.

Sixth, to evaluate each position through the use of job analysis and specifications as the base for a salary-standardization plan.

Seventh, to serve as secretary of a salary committee composed of an appropriate group of principal executives as a further application of the salary-standardization plan.

Finally, to act as a fact finder and adviser to the president and other principal executives in all matters pertaining to executive employment compensation, advancement, retirement, and the like.

Let us not overlook the practical evidence that individual analysis, rating methods, job specification, and advanced personnel procedure in general have been and are now being successfully applied in the United States Army and Navy as well as many in our American business organizations.

By its emphasis on merit and performance the plan would insure, as far as practicable, equity in compensation and precision and smoothness in effecting changes in executive personnel. It would act as a morale builder for executives and other employees and have a stabilizing influence on the enterprise.

**Executive training, Kemper Insurance.** The executive training work carried on by Kemper Insurance, a Chicago organization having approximately six hundred office workers, offers an excellent illustration of the way in which such work may be broad yet practical and specific.<sup>6</sup>

The training classes are not for specific jobs; they are not to give the persons more expertness in purely clerical operations, such as the handling of typewriters or anything of that sort. They are to teach the fundamentals of the insurance business. It has not been the intention to attempt to give a complete executive training but to give a knowledge of the fundamentals of insurance and an understanding of the Kemper organization. It is recognized that the education of an executive is not something which begins and ends with theory and practice, but among other qualifications an executive must have a knowledge of his own business. Not only do these classes give a training for future executives but many others who cannot qualify for ex-

<sup>6</sup> Moon, Victor, "Training Problems of an Insurance Company," *Annual Proceedings*, pp. 95-96. National Office Management Association, 1934.

ecutive positions get a better understanding of their work and are accordingly more efficient in it. Probably only a small per cent of those attending these classes will ever reach an executive position. Next fall we will probably arrange special work for those considered to be executive timber.

These training classes are under the direct supervision of an educational committee consisting of eight executives appointed by the executive vice-president. One function of this committee is to outline the work of the various classes and arrange the schedule of the lectures. The committee makes a quarterly report to the executive vice-president showing progress of the work. Notices of the various classes, the subjects, and the time and place of the meeting are given in the daily office bulletin and are posted on the bulletin boards a day in advance.

During the past year classes have been organized in casualty underwriting, elementary and advanced statistics, claim procedure, life insurance, risk experience, sales promotion, and medico-legal work. These classes meet once a week and are held immediately after the office closes. They usually last one hour. Attendance is purely voluntary. In this way we learn which of our employees are really interested in self-improvement. A secretary is appointed for each class, and a record is kept of the attendance. Each quarter a list of those attending more than one half the sessions of any class is sent to the educational committee, which in turn make a report to the executive vice-president.

As a rule the attendance upon the classes is principally from the department giving the course. The majority of those attending underwriting lectures will be from the underwriting department; statistical lectures will be attended by statistical employees, and so on. However, you will find in each class some from other departments who are interested in knowing something more than the work in which they are directly interested.

Instruction is almost entirely by the lecture method and no textbooks are used, though reference may be made to them from time to time. The material for the lectures or talks is developed from our own daily work. As an example, last winter there was a new development in a certain type of coverage. In the underwriting class that subject was taken up as the theme for the lecture and discussion. This keeps the discussions out of the theoretical and down on a practical basis. It is more interesting because it relates the lectures to the daily work and gives the students an opportunity to learn company policy on various matters. There is always an opportunity for questions and dis-

cussion. In some cases the entire period is taken up with round-table discussions.

Class instruction is given by a department head or by someone designated by him who is well qualified to discuss the subject assigned. Since the preparation of a paper and its delivery before a class is the best kind of training, the talks are assigned to members of the department as much as possible, rather than to the department head. So far all speakers have been from within our own ranks. This is desirable, since one of the objects of the classes is a better understanding of the work of our organization. A steno-typist attends each of the classes and makes a transcript of the proceedings. In some cases this has been duplicated and distributed to those who are interested in giving the subject more study.

## CHAPTER XXIII

### *Other Personnel Activities*

The office manager, acting in his capacity of chief personnel officer, is usually either directly responsible for, or vitally interested in, a wide variety of other personnel activities, in addition to the selection and training of office employees. These include such matters as free time allowances on account of sickness, vacations, and absence for other reasons; the company library; employee publications; insurance; financial aids such as loans, Christmas clubs, and savings funds; and other employee activities, including cafeterias, suggestion systems, length-of-service clubs, and athletic associations. Each of these matters—which someone has aptly described as “extra-curricular personnel activities”—is discussed briefly in this chapter.

**Free time allowances.** For obvious reasons, every company pays its office employees for a certain amount for which it receives no service in return. Tardiness, illness, vacations, and absence for personal reasons normally amount to at least 5 per cent of the time for which an employee is paid during the year. If proper care is not taken, this figure may be as high as 7 or 8 per cent. Thus for a company with an annual office pay roll of \$1,000,000, the loss because of lax methods may easily amount to as much as \$25,000 or \$30,000 a year. Viewed in this light, it is apparent that the establishment and administration of policies and rules covering free time allowances is no mere theoretical consideration but an important practical matter.

• In the study of current personnel practices made in 1935 by the Peirce School of Business Administration in coöpera-

tion with the National Office Management Association, it was found that approximately one third of the 260 reporting companies regulated absences of various kinds by definite schedules indicating the number of days each year an employee might be absent, with pay, because of sickness or for other personal reasons. In three quarters of the cases the amount of such free time varied with the length of service. There appeared to be no particular application of the schedule to any one class of employee.

**Tardiness.** Tardiness, particularly in reporting for work in the morning, is an ever-present problem in practically every office. The methods used for securing as high a percentage of "on time" arrivals as possible, however, vary widely.

The Peirce School survey indicated that approximately one third of the reporting companies used time clocks to record the arrival and departure of their office employees. This practice seems to be particularly prevalent in the offices of industrial organizations and often represents simply a carry-over to the office of a method of control widely used in factories. Not all agree, however, that this is a desirable procedure. For example, Mr. Harry A. Hopf, speaking at the 1935 convention of the National Office Management Association said <sup>1</sup>:

The time clock is one of the most ineffective mechanisms that can be employed for the control of clerical workers. It is a confession of unintelligence on the part of the management to utilize such a mechanism in the office. It confirms the fact that every day 90 or more per cent of all employees are on time, and thereby makes them feel that they are subjected unnecessarily to a police function. Whenever I go into an office and observe the presence of a time clock, I use that fact as an almost certain indication of lack of intelligence exercised by the management. It is the last refuge of those who do not want to think for themselves and a confession of inability to employ constructive means of insuring promptness.

<sup>1</sup> Evans, W. H., "Current Personnel Practices," *Annual Proceedings*, pp. 45-46, National Office Management Association, 1935.

In general it has been found that tardiness can be reduced by educational efforts. Penalties, such as docking, arouse resentment and do not always accomplish their purpose; offering a direct incentive for better attendance generally serves to improve attendance records; the choice of incentive depends to a large extent upon conditions peculiar to the individual employment situation.

**Sickness.** Practice varies widely with respect to the length of time for which an employee absent on account of sickness may be paid, either in full or in part. If there is a health insurance program in effect, which provides that an employee shall receive a stated amount after a given waiting period, usually at least two weeks, the company frequently pays the full salary for the first two weeks of illness, after which the employee is paid from the insurance fund.

Most of the companies with whose practices the writer is familiar ordinarily give full pay for the first two weeks' absence or a total of twelve days' absence in any year. Thereafter, the amount paid and the length of time for which payments are continued are matters to be determined largely on the merits of the individual situation. In general, the longer the length of service, the longer full compensation is likely to be paid. The importance of the employee's position, the quality of his work, and his previous attendance record also have considerable bearing on the decision.

In dealing with the problem of absence due to illness, the office manager needs to guard particularly against two situations that are not uncommon. The first is the case of the sickly employee whose intentions and ability are above reproach but whose health is precarious. The obvious thing for the office manager to do in such cases is to secure the advice of a physician and act accordingly. If the company maintains a full- or part-time doctor, the matter can usually be handled satisfactorily through him; if not, competent outside assistance should be secured.

While the cases of such employees are often distressing, it is clear that no company can be expected to continue in its employ persons whose health will not permit them to work with reasonable regularity.

The second type of situation, which merits constant watchfulness, is the employee who feels that he is "entitled" to at least two weeks' sick leave every year. Such cases should be dealt with diplomatically but firmly and can best be handled by making it clear to the employee that payment for absence on account of sickness is distinctly a privilege rather than a right. A number of companies handle all such situations very satisfactorily by the employment of a full- or part-time nurse who calls at the homes of employees within a few hours after they report being sick. One company reports that it reduced its absence due to "sickness" some 60 per cent in a month's time by the method.

**Vacations.** The usual practice is to give a two-week vacation to all office employees who have been with the company for one year prior to the beginning of the vacation period. In general, employees with less than a year's service receive one day of paid vacation for each month of employment prior to the vacation period. Some firms are more liberal, granting full two-week vacations with pay to all those employed prior to January 1. Most companies specify the period during which vacation must be taken, often June 1 to September 30, but here again a number of companies allow employees to take their vacations whenever they wish to, provided a satisfactory working schedule can be arranged.

In recent years there has been a distinct trend towards greater liberality in the matter of vacations. Many companies now allow employees to begin their vacations at the close of business on Friday, even though the office may be open on Saturday during the vacation period, thus in effect granting an additional half-day's vacation. More and more companies, however, especially in the metropolitan centers



such as New York and Chicago, are either closing their offices entirely on Saturdays during July and August or operating with only skeleton staffs. Many companies allow employees to take an extra week's vacation, or even more, at their own expense. In some cases length of service, or a perfect attendance and punctuality record, entitles an employee to a paid vacation longer than the average.

The scheduling of vacations is often the responsibility of the office manager. The usual practice is to have each department head or supervisor work out the schedule for his own department. The particular time when each individual will be away may be determined by seniority or more often informally by lot among the employees themselves, with, of course, the approval of the supervisor. It then becomes the office manager's task to coordinate all vacation schedules and to keep the paymaster or cashier advised so that the necessary arrangements can be made for paying each employee before he leaves.

The Connecticut General Life Insurance Company recently announced a plan of vacation allowances that enables all home-office employees to enjoy a longer vacation period on each fifth anniversary of employment.<sup>2</sup>

In place of the former plan of allowing service days annually (additional, based on years of service), a "sabbatical" period has been substituted. In the calendar year in which the employee completes five years of continuous service, three additional days of vacation will be granted. Similarly on each fifth anniversary thereafter, a week of extra vacation will be granted in that one year.

**Other causes of absence.** In addition to tardiness, illness, and vacation, there are a number of other reasons why employees may be absent.

Members of the National Guard must not only do a regular tour of duty annually, but are of course subject to emergency calls as well. The annual service period usually

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<sup>2</sup> *Bulletin*, Life Office Management Association, May 15, 1935.

comes in the summer, so that Guard members may spend their vacations in this way. Comparatively few companies allow employees time off with pay for National Guard duty in addition to their regular vacations. On the other hand, absence on account of emergency service is usually paid for.

Employees are customarily paid for the time they are absent on account of jury duty.

Illness or death in the family, weddings, and other personal matters also necessitate occasional absence by office employees. Unless the case is an unusual one which makes it necessary for the employee to be away for a considerable length of time, or unless an employee makes an unreasonable number of requests, the usual practice is to accept such absences as unavoidable.

**Overtime.** Office employees are not ordinarily paid for overtime work,\* on the grounds that they receive paid vacations and are not docked for the various other absences just discussed. In many cases, however, office employees receive supper or dinner money, provided they work a stated length of time, usually at least two hours and sometimes three, beyond the usual closing hour.

The dinner-money payment is intended merely to reimburse the employee for the out-of-pocket expense he incurs by reason of eating in a restaurant rather than at home. If the employee lives at home or boards, such a payment accomplishes its purpose, with perhaps something to spare. If, however, the employee customarily eats at restaurants, then the payment of dinner money represents a real saving to him. Some companies, especially those that operate their own employee lunch rooms for noon-day meals, provide an evening meal free and consequently pay no dinner money in cash.

The office manager should give particular attention to overtime and to payments of dinner money for two reasons. In the first place, an unreasonable amount of overtime, particularly if it is long continued, not only hurts morale but also is indicative of improper organization. A depart-

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\* Since October 24, 1938, the provisions of the Fair Labor Standards Act (Wage and Hour Law) covering compensation for overtime have applied to certain office employees in designated industries.

ment whose normal operations require the services of ten people should have ten employees who work, for the most part at least, regular hours and not eight persons most of whom customarily work overtime two or three nights a week. In the second place, the office manager should guard against a situation developing in which an employee purposely attempts to supplement his regular salary rather materially by dinner-money payments. Cases have come to the writer's attention in which employees have added as much at 15 to 20 per cent to regular earnings by overtime work, some of which, at least, proved upon investigation to be quite unnecessary.

**The company library.** In recent years an increasingly large number of firms have established libraries of their own. A survey conducted by the Life Office Management Association in 1936 revealed that thirty-four insurance companies maintained circulating libraries for the convenience and information of company employees.

If a company has a well-organized research or statistical department, the company library is often an important part of it, and the librarian may report directly to the department manager. However, there are many cases in which the office manager is the responsible executive.

Company libraries almost always contain technical and semi-technical books and current periodicals having to do with the industry or line of business in which the company is engaged. In addition, many have a diversified assortment of general books on such subjects as history, travel, literature, and biography. Some have current popular magazines, and a few libraries have fiction. The total number of volumes may range from 5000 to 50,000; the annual operating cost, including book purchases, from \$3000 to \$20,000 or more; and the number of employees from one to as many as ten.

Mr. Russell J. Waldo, writing in *The Office Economist* of July-August, 1934, on the advantages of a company-owned

library, summarized the relationship between the library, the company, and the employees in this way:

One of the interesting phases of the employees' library is the number that provide books on common school subjects, such as history, novels based upon a historical setting, commercial geography, geography, physiology, psychology, economics, political economy, mathematics, and English. One executive, in discussing this point, said: "If we can induce our workers to read something, we have accomplished much. Once they read something, we have a much better chance of interesting them in the books which will benefit them in their work. Many workers have been forced to leave school at the time they would have been studying these subjects. The reading of this material makes them better able to assimilate other types of reading, which can be selected to help them materially in their work."

**How to organize and manage a company library.** Mr. R. T. Soule of the Engineering Department of the Taylor Instrument Companies, who is in charge of the library from a supervisory standpoint and who participated in its reorganization in 1925, gives the following suggestions for starting a plant library, based on the experience of his company<sup>3</sup>:

In the first place we would heartily encourage . . . the organization of a technical library in a manufacturing establishment. We would, however, suggest that at the outset the responsible executive give thought to the library as he would like it to be in the next five to ten years, laying out his plans accordingly and accomplishing them in such steps as his budget may permit. By such planned procedure, he may build in a consistent manner, no matter in how small increments, and not at some future time find it necessary to go back and re-establish the methods.

He will, without doubt, have someone who will be responsible for the project, plan the activity, and centralize the effort. A stenographer or secretary could then administer the details in connection with other work while the unit is small.

<sup>3</sup> *Operation of Company Libraries.* Policyholders Service Bureau, Metropolitan Life Insurance Company.



The Library of Congress numbers provide a systematic means of placing the books on the shelves in classified manner and also serve to locate books which are desired, by reference to the numbers on the cards in the catalogue file.

As to trade magazines and periodicals, we find it very essential to keep a record of each subscription on Library Bureau Card No. 1105.1 (Figures 144 and 145), recording the frequency of publication, expiration dates, and so on. This card is checked to indicate the receipt of each copy, so that any irregularity of receipt will be noted at once.

Rather than permit the promiscuous handing about of pe-

Publisher _____						Bind { Yes No	
Address _____						T.P. Index	
Indexed in _____						None	
List Price _____						Last No. _____	
						Write _____	
Ordered	Begins	Expires	Date of Bill	Cost	Source	Bindery	
						Sent	Returned

Fig. 145.—Magazine Record Card (Back).

riodicals, a circulation reading list (Figure 146) is prepared and attached to the periodical, listing the names of those who should read it and the order in which it is to be circulated. Magazines and journals received through memberships in scientific societies are treated in similar manner. At the end of the year such periodicals as are of importance for reference are bound in book form and catalogued.

**Employee publications.** During the past year or two there has been a tendency to revive employee publications, which were either discontinued entirely or reduced in frequency of issue during the depression. Twenty-seven of the seventy companies contributing to a survey of this subject made by the Life Office Management Association in 1936 reported that they were regularly issuing such publica-

tions. Of this number, nineteen issued them monthly, the balance quarterly or at irregular periods.<sup>4</sup>

The primary purpose of employees' publications or house

<sup>4</sup> *Bulletin*, Life Office Management Association, August 15, 1936.

CIRCULATION READING LIST		
<hr/> <u>Issue of</u> <hr/>		
Sent out		Due back
Circulate in order listed. Names added by request only.		Indicate date you pass magazine on.
<p><u>Please</u> do not hold this magazine longer than <u>two days</u>. If it is not convenient for you to read it when received, mark your name off, reenter same at end of list and pass on to next reader. Magazine may be taken out for longer periods after circulation has been completed. A file of this magazine is maintained.</p> <p><u>PLEASE DO NOT CLIP.</u></p> <p style="text-align: right;">TAYLOR Library</p>		

Fig. 146.—Circulation Reading List.

organs, as they are often called, is to build employee morale and foster better coöperation between the company and its employees. The best way to get coöperation in the office is to make each employee feel that he contributes to its success. The same rule, handled by a skillful editor, will work in editing the office publication. A message from the president has its place, but so has a message from the office boy. The function of the office house organ is to help stimulate a spirit of fellowship and coöperation, a realization of the common ends to be met by the organization as a group.

Employees' publications must be human if they are to be successful. Contents will vary with the business of the company; details of make-up, typography, and general features will follow largely the likes of the editor, but if the editor appreciates the importance (to himself) of each individual employee, and of the importance to the company of welding the group into an harmonious whole by catering somewhat to their individual likes, the house organ can be a power for good beyond the dreams of its best wishers.

Readers' interest depends to a great extent on the physical appearance of the publication. It must present a clean-cut, businesslike appearance, free from mechanical errors. Nothing kills interest more quickly than slovenliness in composition or printing. Poor cuts or paper, and typographical errors, will ruin the best of reading material. No matter how interesting the material is, an attractive and readable appearance is necessary. It is also well to bear in mind that house-organ readers are busy people. This fact has a direct bearing on the appearance of the publication, for if a businessman picks up a house organ that is large or thick, he generally lays it aside until he has more time. House organs should first and foremost, from the businessman's standpoint, have few enough pages and be small enough to be easily held.

**Insurance.** Some twenty-five years ago the first group life insurance policy, under which all persons in a single group are insured under one policy at a standard premium



for all, was written. Since then group insurance, covering not only life, but also health, accident, old age, and unemployment, has made great advances, with the result that today several million workers in thousands of offices and factories are covered by group insurance plans of many kinds. The passage in 1935 and thereafter of social security acts by both the federal and state governments has now put the matter of insurance for workers on a national basis.

In the survey of personnel practices made in 1935 by the Peirce School of Business Administration, in coöperation with the National Office Management Association, insurance was one of the major subjects investigated. Among the findings were the following <sup>5</sup>:

(a) "Are your employees covered by a death benefit plan?"

More than 75 per cent of the institutions surveyed answered, "Yes."

(b) "Do your employees make current payments toward the cost of such a plan?"

Sixty-two per cent answered, "Yes."

(c) "Is group health and accident insurance available to your employees?"

Approximately 50 per cent of all companies used some form of group health and accident coverage.

(d) "Do your employees make current payments toward the cost of such insurance?"

In 80 per cent of the instances reported, the employees bore part or all of the cost.

It is obviously impossible to enter into a detailed discussion here of the many forms of insurance coverage which are available to employees. The following paragraphs do, however, indicate the principal kinds of insurance in force, together with the current practices of a number of well-known companies.

### Group life insurance.

Group insurance affords life insurance protection to all employees in a given concern at wholesale rates.<sup>6</sup> The company

<sup>5</sup> *Ibid.*

<sup>6</sup> Adapted from Cornell and MacDonald, *Business Organization and Practice*. American Book Company, New York, 1936.

insuring its workers is given what is called a blanket policy; that is, a single policy covering all the employees insured under the terms of the agreement. Each worker so insured is given a certificate as evidence of his protection under the group policy. The certificate states the name of the beneficiary chosen by the worker and the amount of insurance. Some group insurance policies provide sickness and non-occupational accident benefits, and some make provision for employees who become permanently disabled. The amount of insurance each employee receives is a matter of arrangement between the insurance company and the concern insuring its workers and may vary from \$500 to \$10,000 per employee. The company may pay the entire premium, although in many cases the employee pays part of the cost. Among the advantages of group insurance are the following:

1. For the employer it tends to win the coöperation of the workers and to create a more stable working force.
2. It gives insurance protection to the employee who could not ordinarily afford to pay the premiums required for such protection. He, therefore, feels that his dependents are at least partly taken care of.
3. A physical examination is not required under the group plan. Many employees are, therefore, insured who could not take out insurance themselves, as they could not pass the physical examination required under the individual policy.
4. Visiting-nurse service is frequently maintained by the insurance company under the group plan. This service is given to the injured or sick employee without cost.

### Group accident and health insurance.

Group accident and health insurance is based on the same principles that underlie group life insurance. In some cases the employees, in coöperation with the company, form their own benefit association, which operates entirely independently of any insurance company, while in other firms accident and health insurance constitutes a definite part of the whole group insurance program administered by an insurance company.

In a benefit association the usual plan is that each member pays a small sum of money into the treasury of the benefit association each week.

In some cases the dues are payable monthly. In return for this payment, the association agrees to pay a stipulated amount per week to any member who is absent from work on account of illness or accident. In many benefit associations the dues

paid and the disability benefits received vary with the salary of the member. The following table shows the weekly dues paid by various classes of employees in one association and the benefits to which they are entitled:

Class	Weekly Earnings	Weekly Dues	Benefits per Week for First Fifteen Weeks	Benefits per Week for Succeeding Ten Weeks
A	Less than \$12.00	12¢	\$ 8.00	\$ 4.00
B	\$12.00 to \$14.99	15¢	10.00	5.00
C	\$15.00 to \$19.99	20¢	13.25	6.62
D	\$20.00 to \$24.99	25¢	16.50	8.25
E	\$25.00 to \$29.99	30¢	20.00	10.00
F	\$30.00 to \$34.99	35¢	23.25	11.62
G	\$35.00 or over	40¢	26.50	13.25
H	Salaried	25¢	10.00	5.00

The rules usually provide that a week or ten days must elapse before benefits start. Another clause makes provision for the payment of a specified amount to the members of the family of an employee who dies while in the service of the company. In some cases membership in the association automatically starts with employment, but usually membership is solicited. While in theory the benefit plan is entirely an employee affair, in practice the company frequently has some connection with it. Someone, for example, must keep the records, handle the income and disbursements, and act as manager of the association. The company usually allows the person thus designated to spend part of his time—for which the company pays—on association matters. When dues are deducted directly from the employee's pay envelope, before he receives it, as is done in some cases, the relation of the company to the association is even closer. In some instances the company contributes a pre-arranged amount to the funds of the benefit association. This may be a sum equal to a certain percentage of the amount paid by employee members as dues, or it may be a flat sum previously agreed upon.

### Office accidents.

Regardless of whether or not employees are protected by insurance against accidents, one of the important responsibilities of the office manager is to see that every reasonable physical safeguard is established to prevent accidents.

A recent study of 20,000 industrial accidents indicated that the incidental costs of accidents occurring in the office were approximately the same as in the factory, both being from four to five times the direct cost.<sup>7</sup> The indirect expense includes such items as lost time, impaired efficiency, and so on. The most frequent accidents reported in the office were falls which, to a very large extent, were traceable to slippery floors. Highly glazed waxed floors have proved an expensive luxury.

The study further revealed the fact that practically all office accidents were due to carelessness and, therefore, avoidable. It recommended the designation of some qualified person in each office organization—who might well be the office manager—to conduct a periodic survey of possible accident hazards, with a view to eliminating them. Among the hazards responsible for the majority of office accidents are the following:

1. Highly polished floors, particularly at "change of direction" points.
2. Protruding power and telephone outlets creating stumbling hazards.
3. Extension cords on floors across aisles or in other areas where employees have occasion to walk.
4. Loose electric-fan blades and defective fan guards.
5. Walking through closed, transparent, and unlettered glass doors.
6. Matches placed in stands with the heads exposed.
7. Storing highly inflammable materials in lockers or cloak rooms.
8. Spontaneous ignition from stacked newspapers or other printed matter containing ink.
9. Tripping hazard created by loose linoleum and carpeting.
10. Stumbling hazard presented by open lower desk drawers.
11. Inadequate illumination on stairs.
12. Splinters from loose veneer on desks and curved backs of swivel chairs.
13. Running in corridors or on stairways.
14. Using razor blades for sharpening pencils and erasing ink lines.

### Pensions.

One of the serious problems of management is to decide what to do with the employee who after years of service becomes permanently disabled or has reached an age at which he is no longer able to continue on his job.<sup>8</sup> In a small concern such cases are few in number and far between, and each case can be decided upon its merits. Even in such companies, however, it

<sup>7</sup> *Bulletin*, Life Office Management Association, April 15, 1936.

<sup>8</sup> Adapted from Cornell and MacDonald, *op. cit.*

is well to think about the problem before it comes up and to provide for it; otherwise a case may arise in a time of business depression, and the company may not be in a financial condition to provide for its employee, although the management would like to do it.

The most serious objections to the older forms of pension plans are now being met in one of two ways. First, a trust agreement may be made under which adequate funds, determined after a study by a competent actuary, are turned over to trustees who administer the plan in coöperation with the company. In such a case the funds held are invested conservatively and are used exclusively for pension payments and any other definite provisions for employees that may be set forth in the trust agreement (death benefits, and so on). The second plan is the retirement annuity plan underwritten by an insurance company. The latter pays the annuities to the pensioners and meets any other provisions for the employees provided for in the annuity agreement. The safety of the funds is guaranteed by the insurance company. Opinion seems to be increasingly in favor of the second plan.

The recent social security laws have caused the matter of pensions to superannuated workers to be brought sharply to the attention of employers and employees alike. Any pension plan besides that already provided by law should be thoroughly studied before the company management commits itself. There are many practical problems to be solved if a plan is to be satisfactory and lasting. Experts in the field should be consulted, and the results of similar plans should be studied.

The following list of points is far from inclusive. It is given merely to show something of the broadness of the subject.

*Who shall be eligible?* Usually all employees, with the possible exception of the higher executives.

*How long should an employee work for a company before he becomes eligible?* The period should be sufficiently long to exclude temporary employees. One or two years ordinarily will be sufficient.

*Shall the entire expense of the plan be borne by the company, or shall the employees participate?* In many retirement plans the company pays the entire cost. In others the employees contribute a certain percentage of their regular salaries and the company pays the remainder. Under some plans the employee's contributions are applied to the payment of an additional annuity to supplement that granted by the company.

*What shall be the normal retirement age?* \* The normal age

for retirement is sixty-five for men and sixty for women. Retirement at this age may occur at the request of either the employer or the employee. Many plans, however, provide that the employee may be retired at the discretion of the employer at any age between fifty-five and seventy.

*What shall be the length of service required before an employee can retire on a pension?* The period of continuous service usually required is twenty-five years, although the number varies all the way from ten to thirty-five years of service.

*What should be done in the case of a man whom the company wishes to retire but who has not served the required number of years?* The man should be retired at an adjusted rate based upon the years of service, his age, and the reserves on hand.

*What shall be the amount of retirement payments?* Practice differs widely on this point. A common procedure is to base the retirement allowance on a percentage of the last five or ten years' average pay multiplied by the years of service. Thus if the average pay for a man for the last ten years was \$2500 and the company allowed him 1 per cent, he would receive 1 per cent of \$2500, or \$25. This, multiplied by his years of service, for example, 30 years, would be \$750 per year. The percentage allowed usually ranges from 1 to 2 per cent. Some plans provide maximum and minimum limits for annuity payments, expressed either as a percentage of salary or in dollars. For example, a minimum may be \$30 per month or 25 per cent of earnings, while the maximum may be \$100 per month or 50 per cent of earnings.

The governmental old-age benefit plan, recently enacted, seeks to establish a national pension system applicable to everyone, regardless of his personal financial situation and whether or not he is already included in a company plan.

**Unemployment insurance.** One of the primary purposes of the new federal and state social security legislation is to provide funds from which payments may be made to unemployed persons under certain conditions. The length of the waiting period before unemployment compensation is payable, the amount to be paid, and other specific requirements vary in the different states.

Only a limited number of corporations have adopted unemployment insurance and employment stabilization plans. The William Wrigley, Jr., Company, however, offers an excellent example of what may be accomplished by a pri-

vate employer. The following paragraphs summarize the Wrigley Employment Assurance Plan.<sup>9</sup>

### The employment agreement.

This agreement provides for a definite "contract period" of employment and remains in operation from year to year unless terminated by either the employee or the company. During this period, the employee is assured of employment, if he renders proper service.

It establishes the "employment base rate" of the employee for services faithfully, efficiently, and satisfactorily rendered to the company. This is his regular rate of compensation.

It provides for the suspension of employment for conditions beyond the control of the company and for the payment of unemployment compensation during the "lay-off period."

The right of discharge upon sufficient cause is reserved to the company, but the employee so discharged is granted the privilege of appeal to the vice-president in charge of his department or to the president of the company.

### Unemployment pay.

If for any cause lay-offs should be necessary, the company may lay the employee off, but, if it does, it agrees to pay him a percentage of his best base pay for a given period of time.

Both the percentage and length of time of unemployment pay are on a sliding scale, those receiving the lowest pay getting the highest percentage, on the theory that the smaller the pay, the less opportunity the individual has to lay anything aside for a rainy day.

The unemployment pay ranges from 80 per cent on the lowest salaries down to 60 per cent and 40 per cent, and includes all regular employees receiving \$6000 a year and less.

The number of weeks that such pay will continue depends upon the length of service. Anyone who has been with the company more than six months and less than 2 years, for instance, will be paid lay-off compensation up to 16 weeks; from 2 to 5 years, up to 20 weeks; 5 to 10 years, up to 24 weeks; and over 10 years, up to 28 weeks.

During the lay-off period, while he is receiving lay-off pay

<sup>9</sup> "The Employment Assurance Plan of the William Wrigley, Jr., Co.," *Annual Proceedings*, pp. 56-57. National Office Management Association, 1934.

from the company, the employee must not accept relief or compensation elsewhere. The company believes that the rate of lay-off compensation is high enough to take care of him. This is done to prevent the cluttering up of public relief rolls or flooding the market with cheap labor, for by receiving partial compensation from one firm the employee could afford to work for another for less than standard pay.

### Control of the funds appropriated.

The Wrigley Company does not believe that funds appropriated for the plan should be set aside in a bank, or insured in an insurance company, since such methods would mean that the employee would have to look to some company other than his own for his security.

### Philosophy of the plan.

This plan assures an employee of a definite income for a definite period of time, regardless of conditions beyond his control. It is a backlog for him just as the surplus of the company is a backlog for the stockholder, assuring the latter of some dividend even though the company is temporarily shut down and not earning it. As the surplus of the company is the dividend guarantee to the stockholders, it seemed only right that the latter should share some of this security with the employees. This fund is the assurance to the employee that the plan will be carried out. It gives him an interest in the resources and surplus of the company that he has not had before. Moreover, it is the belief of the company that any organization that is in a position to do so should assume the full responsibility, rather than only a part of it, of taking care of its employees in slack as well as in boom times.

In connection with this plan Mr. Philip K. Wrigley, Jr., president of the company, said:

This plan may sound idealistic to some people, but we are firmly convinced that the company as a whole will benefit by its adoption. The success of any concern depends entirely upon the productiveness of the people who do the actual work, and if they are free from worry and feel that the firm of which they are a part is whole-heartedly co-operating with them, we believe it is human nature for them to give their best in return. If the matter of unemployment is to be made the subject of universal application by means of laws, then we believe in the American theory of individuality and that each industry or company should be allowed to make a plan which takes care of its



particular type of business as long as it meets whatever general standards are required.

**Other personnel activities of a financial nature.** In addition to insurance plans of the kinds just discussed, a number of companies carry on various other personnel activities of a financial nature.

A problem common to all office organizations, and one with which the office and personnel manager must often deal personally, is the matter of requests by employees for temporary loans. Because every right-thinking businessman wants to do what he can to discourage loan sharks and others who prey on the misfortunes of respectable people, there is often a tendency to be rather lenient when such requests are made. On the other hand, experience shows clearly that unorganized lending of company funds may result in unwarranted losses.

In general, two methods of handling the employee loan problem are in use. One is to make such loans available to employees under a definite set of rules which apply in all cases. The primary requisites of such a plan are the determination of the need, a fixed maximum amount to be loaned, based in part perhaps on each employee's salary, and a definite arrangement for liquidation of the indebtedness over a given period of time. The other method, which has found increasing favor in recent years, is based on an arrangement between the company and a bank or responsible personal loan company under which employees may borrow money on their own notes without the necessity of securing other co-makers. In such cases the company does not guarantee the loan, but merely informs the bank that the applicant is a regular employee earning a certain salary.

A few companies coöperate with their employees in financing home purchases, especially in cases where the company is the principal business establishment in the community. Here the arrangement is usually quite similar to that which the borrower would ordinarily make with a bank or building and loan association.

Several companies have established savings funds for their employees. One large eastern insurance company outlines its plan as follows<sup>10</sup>:

The Mutual Savings Society presents a convenient and profitable method of accumulating funds. Dues are one dollar (\$1.00) per share and are payable in semi-monthly installments of fifty cents each for a period of three years, when the share matures. The value is then paid in cash. A new series of shares starts in March of each year.

To the normal earnings upon the invested funds of the Society the company adds, when a series matures, a distribution based on the length of service of the shareholder, provided he is not an officer of the company or receiving a salary in excess of \$4000 a year. From 1.6 per cent per annum for an employee of three years' standing, the rate increases .2 per cent for each year of service up to the twentieth year, when a maximum rate of 5 per cent is obtained.

**Other employee services.** A number of companies make various other services available to their employees. Among these are lunch rooms and cafeterias; coöperative stores and other special purchasing arrangements, including discounts on goods made by the company; suggestion systems; length-of-service clubs, such as the Ten Year Club, the Quarter Century Club, and so on; athletic associations; social activities, including singing and dramatic classes; and the establishment of summer vacation camps.

The Peirce School survey made in 1935 showed rather clearly that up to that time, at least, there has been a distinct revival of activity in general welfare work of the kinds just mentioned. In answer to the question, "In your organization, would you say the present trend is toward an expansion or contraction of such employees' activities as are typified by musical organizations, athletic teams, social affairs, and so on?" the report states:

According to our informants, 52 per cent of the organizations are witnessing an expansion of employees' clubs and other ac-

<sup>10</sup> *Bulletin*, Life-Office Management Association, August 15, 1936.

tivities, while 20 per cent reported a contraction. For the remaining 28 per cent who did not answer, we assume a neutral position—indicating neither expansion nor contraction. In view of the recent attempts at economy, it is interesting to note that 132 companies are now expanding employee activities.

**Personnel program of the Eastman Kodak Company.** In this chapter a considerable number of "extra-curricular" personnel activities for office employees have been discussed. Naturally, few if any companies undertake them all. On the other hand, many companies carry on several of the activities which have been mentioned. The practices of the Eastman Kodak Company offer an excellent illustration of a well rounded-out program.<sup>11</sup>

*Self-preservation.*

1. A sick benefit plan, based on length of service, provides compensation during illness. The amount varies from one day's pay for each completed month of service during the first year of employment up to a maximum of twenty-six weeks' salary after approximately six years of service. This applies to office employees. Factory workers are provided for on a modified basis.

2. A medical department gives complete physical examinations at the time of employment and upon request periodically thereafter, treats sickness during working hours, offers assistance in diagnosing illness, and advice as to treatment and selection of an outside physician. The medical service also includes free eye service, nutrition advice, some dental work, and visiting nurses who call at the homes of sick employees.

3. A wage dividend, based on length of service, salary, and dividends declared upon the common stock of the company, has been paid every year since 1912, with the exception of 1934. Altogether some \$34,500,000 has been so distributed. Approximately \$825,000 more will be paid in 1936. For example, a clerk receiving an average salary of \$20.00 per week for the

<sup>11</sup> Fulton, H. D., "Important Aspects of the Personnel Problem: Employee compensation and the development of proper employee attitude," *Annual Proceedings*, pp. 39-41. National Office Management Association, 1936.

last five years will receive in 1936 approximately \$52.00. The wage dividend is a recognition of the value of trained steady workers, and a reward for continuous service. It has never been intended as a substitute for wages, nor is it considered in establishing rates.

4. In 1928 the company adopted a combined retirement annuity, life insurance, and disability benefit plan to provide for retirements on account of age or disability or for death. The plan is handled on a group basis in coöperation with a large insurance company. Length of service, earnings, and age are the factors which determine benefit provisions. Since the introduction of this plan in 1929 and up to the end of 1935 payments were as follows:

\$600,000 in the form of annuities.

\$300,000 in payments to disabled workers.

\$900,000 to beneficiaries of dead employees.

Employees have never contributed to the premiums.

5. Several steps can be taken toward the elimination of seasonal layoffs:

- a. Departmental transfers.
- b. Encouragement of vacations during the slack season by allowance of more time then.
- c. A flying squadron that can fill in when peaks occur.
- d. Performance of special jobs during the off season.

The whole problem of stabilization is essentially one of careful planning and scheduling of work.

6. The foregoing plans and policies represent some of the direct efforts of the company to satisfy the self-preservation urge that is found among all employees. One indirect effort in this group deserves mention. In the belief that part of the responsibility for providing for a "rainy day" rests upon the worker's shoulders, the company attempts to point out from time to time the value of thrift during the days when the worker's earning capacity is greatest. This is done by posters, pamphlets, and articles in the company magazine. In addition, there is a subsidiary organization, incorporated under the banking laws of New York State, which provides a convenient, safe, and profitable means for saving and investing small amounts. It is interesting to note that approximately 45 per cent of the employees—the average is even higher in the office—make use of this facility.

*Desire for a home.*

1. The Kodak Employees Realty Corporation has been organized to render assistance to employees in the building of homes. Through purchase and development of large tracts of land and the building of houses in groups, it is possible to offer well-built homes at attractive prices.

2. Employees are assisted in the financing of these homes by the Eastman Savings and Loan Association, previously mentioned, and another organization known as the Kodak Employees Association. Assistance is rendered also to employees who may prefer to build homes in other places.

*Desire for self-expression and advancement.*

1. The company recognizes the desire for self-expression by having a suggestion system whereby employees can offer their ideas and receive a cash award for those adopted. During the past eight years approximately \$55,000 has been paid out for ideas submitted by workers.

2. The advancement urge can be satisfied by making as many promotions from the ranks as possible. During the eighteen months ending July 1, 1935, one hundred and sixty-six changes considered to be promotions were made in the office. Roughly this represents a promotion of approximately 8 per cent on an annual basis.

3. Provision is made by the company whereby employees can take advantage of outside educational facilities—night and trade school—to study subjects that fit them for further advancement and responsibility. This provision is in the form of a partial refund, usually about half, of the tuition charge. Last year \$5500 was paid back.

*Desire for recreation.*

1. Vacations of two weeks with pay are given to clerical employees after the completion of one year of service.

2. The company believes in the value of providing recreational facilities. Voluntary employees' organizations were formed in each plant, with employee officers, to foster the activities. The usual dues are \$1.00 per year, which the company matches with another \$1.00, as well as supplying the part-time service of several men to assist in carrying out the activities. Such things as athletic teams, bowling leagues, bridge clubs, book reviews, choral work, picnics, and smokers are sponsored.

**Summary.** Collectively, personnel and welfare activities such as those discussed in this chapter form an important part of a complete personnel program. The existence or absence of any one of them may not greatly affect employee morale one way or another. Taken together, however, they comprise a group of activities to which progressive office and personnel managers are giving increasing attention.

## CHAPTER XXIV

### *Payment of Office Employees*

There is probably no single subject of greater interest to both the management and the employees than the matter of compensation. If salaries are too low, morale suffers, inferior work is produced, labor turnover increases, real costs of production are likely to be considerably higher than salary rates would seem to indicate, and purchasing power, upon which all business depends, suffers. If, on the other hand, salaries are too high, profits are not what they should be, with the result that the stockholders criticize the management and may turn it out.

In too many companies salaries paid are determined essentially as the result of a bargaining process between the management and the employee or applicant, the amount finally agreed upon being a compromise between what the management is willing to pay and what the employee thinks he should have. This is especially true in the case of office employees, who are not in a position to enforce their demands in the way that factory workers do, or at least do not care to do so. Furthermore, it is only within recent years that any widespread efforts have been made to measure the output of office workers.

Payment of office workers is a subject in which the office manager has an especially definite interest, not only directly because of his duties as personnel manager, but also because compensation is—and if it is not it should be—one of the office manager's principal functional responsibilities in all departments.

**Need for scientific salary administration.** It is evident that numerous injustices often result from a lack of ade-

quate salary standards. Among the evils of such practice are: (1) inequalities in remuneration for similar work throughout a company; (2) improper relationships that often exist between the compensation of different individuals and their respective contributions; (3) salary adjustments based purely on seniority rather than on merit; and (4) the tendency of selfish department heads to oppose the transfer of employees whom they consider valuable.

**Fundamental principles.** The fundamentals that underlie the development of a sound and practical plan of scientific salary administration may be summarized as follows:

There should be (1) approximate uniformity in remuneration for the same grade of work throughout the company. (2) A logical relationship should be maintained between different grades of work and the respective remuneration for these grades. (3) There is a limit of remuneration for each job below which compensation would be unjust and unethical. (4) There is a limit or remuneration for each job above which compensation would be uneconomical, regardless of how well the work was performed. (5) There should be an opportunity for regular progression from the lowest to the highest limit of remuneration for a job and an opportunity for promotion to positions of higher grade at increased salaries.

It is realized that in almost every organization there is a small percentage of clerical jobs that cannot be classified. Such jobs require creative imagination on the part of the incumbents. However, the vast majority of clerical jobs can and should be classified. The establishment of a maximum salary for an office job does not in any way stifle the initiative of the employee, but rather develops individuality.

There are three steps in the installation of a sound plan of salary administration<sup>1</sup>:

1. Job analysis and the preparation of job specifications.

<sup>1</sup> Adapted from Goldsmith, Dorothy B., *Guardian Life Insurance Company of America, "Salary Administration," Annual Proceedings*, pp. 66-75. National Office Management Association, 1931.



2. Job classification.
3. Establishment of salary schedules; that is, setting minimum and maximum figures and step rates for each grade of the job classification.

### **Preliminary steps.**

After the decision to introduce scientific salary administration has been made, the first task is to prepare the way for the job analysis. To send out an analysis questionnaire without any warning would be to court disaster. The minds of most clerical forces, justifiably or not, are suspicious. The first response to an unexpected questionnaire would be, "What does the management expect to get out of this?" Frankness is essential to gain coöperation, and the personnel must be told what the object of the investigation is and how they will be affected by it.

First of all, then, department heads should be called together and told that the object of the study is to place salaries on a fairer basis and to secure more equitable adjustments in the future. Shortcomings and difficulties in the past are pointed out. The department head must be sold on the program in order that he may be in a position to answer the questions of his subordinates. When this has been accomplished, a letter over the signature of the officer in charge of personnel is sent out to all employees. This letter should contain substantially the same information as that given to the department heads.

### **Methods of making a job analysis.**

There are three possible methods of making a job analysis. The one used will depend largely on the particular organization and its problems.

1. Questionnaires may be sent to the employees. When these are returned, doubtful points are discussed with them in personal interviews. Job specifications can then be made out, and the finished product handed to the department head for his approval.

2. Another method is to send out questionnaires to all employees, including the department head, who is asked to give a description or analysis of typical jobs in his department and a list of names under each job. Any discrepancies between the employees' descriptions, which have been sorted into what seem to be typical positions, and those of the department head, are ironed out. Several representatives of each typical position are interviewed, and the facts of the analyses verified or corrected.

Name ----- Department -----

Date ----- Dept. Head -----

Position ----- Section Head -----

Person in direct charge of your work -----

1. What cards or books do your work with? -----  
 (Give ALL, even though kept in lead pencil or in pad  
 form for your own convenience.)  
 What files do you go to personally? -----
2. From whom do you receive your work, and how?  
 (That is, by messenger, go after it yourself, passed  
 from next desk, etc.) -----  
 To whom do you pass your finished work? -----
3. WRITE A COMPLETE DESCRIPTION OF YOUR DAILY  
 DUTIES, stating how much of each kind, and how much  
 time you give to each kind of work. (Continue on back  
 of sheet if more space is needed.)
4. Write a complete description of any other duties that  
 occur periodically—weekly, monthly, annually, or at  
 other intervals, even if irregular. State also how much  
 of each kind, and time given to each kind of work ----  
 -----  
 -----  
 -----
5. What written instructions have you? -----  
 What copies of memorandums have you? -----  
 What copies of circular letters have you? -----
6. Who does your work when you are away? -----  
 Whose work do you do when he (or she) is away? ----
7. List below any suggestions for improvement that you  
 have, in:  
 (a) Your own work -----  
 (b) The work of others in your department -----  
 (c) Work of other departments that affects you ----  
 (d) Work of other departments in general -----

Fig. 147.—Job Analysis in Questionnaire Form.

Tentative job descriptions can then be made and submitted to the department head for his approval.

3. A third method is to interview each employee at his desk, and ask him to describe his work. The advantage of this is that he has all books and records at hand and can refer to them as he talks. After the interview a job description is written by the interviewer and given to the employee for correction, after which a job specification is prepared and checked with the department head. The great advantage of this method is that it brings about a close contact with the employee; its weakness is that the department head is left out of the picture until rather late in the day.

In the average company a combination of these methods is used. A questionnaire (Figure 147) sent to all employees gives data on the duties and responsibilities of each job, the flow of the work, and the records involved. After these have been returned, questions of routine can be cleared up by interviews with the clerks concerned. Each analysis may then be submitted to the department head, and any points he and the clerk raise may be gone over and straightened out. Job specifications for each position must be written and passed to the department head for his approval on all points, including educational requirements, experience, and promotional lines.

### Preparation of job classifications.

The completion of the job analyses and specifications is only the initial step in installing a complete program of salary administration. After they have been secured they must be grouped, and a graded classification must be worked out for the whole organization. Such job classifications may be made in one of the following ways:

1. Ask the department head to grade all the jobs in his department. Corresponding positions are then selected in other departments, and jobs of equivalent value put in the same grade. The final classification must be approved by each department head and by the executive officers of the company.

2. Have at least two competent persons study the job analyses and job specifications for the purpose of grouping typical positions in such a manner that each group possesses certain characteristics differentiating it from the others. From these groups grades of increasing importance can be established, which will continue to be correct irrespective of changes in personnel or in routine. After the grades have been established each job

is classified by each of the workers. When any disagreement concerning the proper classification arises it is settled, if possible, by further study of the job analysis and job specification. If agreement is still lacking the clerk is re-interviewed. The head of the department must approve the completed classification. If further questions arise, the job analyses and job specifications are referred to, and if there is still doubt, the department head and the two persons who made the classification all go back to the clerk to straighten out the matter. The success of this method depends both on the clearness and simplicity of the grade definitions and upon the ability, training, and background of the persons making the study.

3. The third method is perhaps the most difficult, but if correctly worked out, gives the most satisfactory results. Objective factors which can be expressed quantitatively, and are relative to all jobs, must be selected. These factors should serve to differentiate between grades. Weights are assigned to each factor in the scale, and the total gives a grade score for each job. Gradings are checked against the relative importance of jobs within each department and between departments. In addition, they can be checked against promotional lines laid down for the jobs. The danger in this method is that the factors and their weights, as well as the ratings themselves, are a matter of personal opinion, and in order to minimize this source of error, the ratings should be made independently by several raters.

Position classifications and group descriptions used by the Westinghouse Electric and Manufacturing Company. The Westinghouse Electric and Manufacturing Company has worked out a complete classification of positions by departments, together with a description of the duties and responsibilities of each group. The works positions, by groups, are described as follows <sup>2</sup>:

#### Group VI. Administrative

*General Works Manager*

*Director, General Works Staff*

*Works Manager*

*Assistant Works Manager*

<sup>2</sup> Roberts, E. B., "Position Analysis and Classification," *Management Review*, p. 207, July, 1935.

These administer the broad manufacturing responsibility, universally, functionally, or within a prescribed division of the manufacturing organization; by negotiation and arbitration bring into harmonious arrangement individual and divergent interests; promulgate general rules and procedures for the manufacturing organization as a whole, or within the limits of jurisdiction; shape broad plans and apply them. The position involves executive responsibility of the first order for large or small groups of subordinates depending upon the sphere of activity.

#### Group V. Executive

*Superintendent*  
*Captain of Police*  
*Assistant Superintendent*  
*General Foreman*

The function is that of the executive who translates plan into action, by the control of the direction in which those of the lower groups will apply their efforts, and the interpretation to them of the meaning or intent of the policy or procedure. They advise with superiors on policy and procedure reflecting to them broad knowledge of and experience with operating conditions.

#### Group IV. Creative

<i>Supervisor, General Works Staff</i>	<i>Manufacturing Engineer</i>
<i>Supervisor, Works Manager's Staff</i>	<i>Maintenance Engineer</i>
<i>Division Staff Supervisor</i>	<i>Tool (Design) Engineer</i>
<i>Assistant Division Staff Supervisor</i>	<i>Plant Layout Engineer</i>
	<i>Test Engineer</i>

The function is that of the creation of material values. The positions call for familiarity with techniques and a breadth of conception of their application and with the ability to discriminate and choose or reject. They observe phenomena by study of a manifold of situations, and collect data for the construction of patterns for use in formulating general procedures, thereby establishing standards of practice. Their influence extends downward in the organization, carrying with it the tone of superiors, and upward to those superiors influencing the tone and character of the executive instructions that are promulgated in those higher groups to set policy in action.

Under their technical leadership, the operation of the creation of things is carried out by the hourly paid workers, the integrated result of which effort is to be recognized on this level.

However, the individual hourly paid jobs are of the skilled and unskilled groups.

The function of the staff supervisors and engineers of this group is the accomplishment of that integration.

### Group III. Interpretive

*Foreman, Assistant Foreman,  
Shipper, Police Sergeant, Buyer,  
Office Manager, Secretary, Time  
and Motion Analyst, Chief Clerk  
(Chief of Clerical Section), Lay-  
out Draftsman, Inspector*

These are jobs of interpretation. The function is to meet, classify, and cope with situations clearly recognized as within the scope of the established system. These things are done by applying the standards created in the higher groups. Those who function in this group must clearly see the situation in hand, and fit it into the established pattern. The work may involve secondary executive responsibility for the control of the efforts of large or small groups of workers.

### Group II. Skilled

*Production Clerk, Detail Drafts-  
man, Assistant Buyer, First  
(Power Plant) Engineer, Process  
Demonstrator, Statistician, Sec-  
ond (Power Plant) Engineer,  
Secretary-Stenographer, Inter-  
viewer, Ledgerman, Stenogra-  
pher, Typist*

These are the jobs of skilled workers. The tasks require discrimination and choice, technique of hand or brain, and often artistry.

### Group I. Unskilled

*Storekeeper, Shipping Clerk,  
Schedule Clerk, Order Stock  
Checker, Record Clerk, Tran-  
scribing Clerk, Switchboard  
Tender, Store-Room Attendant,  
File Clerk, Duplicating Machine  
Operator, Office Boy (Girl)*

The job is the accomplishment of assigned tasks in an established routine fashion. To function in these jobs, accuracy and dependability are necessary, but neither experience nor training is required.

### Establishment of salary schedules.<sup>3</sup>

The next step in putting a system of salary administration into operation is setting the salary schedules for each level. Minimum and maximum salaries must be assigned, together with intermediate step rates. The range should be such that an average employee can progress from the minimum to the maximum figure in about three years. The range, spread, and the number of steps in it will depend in some measure upon the promotional possibilities to the next level. Where these are plentiful the range can be smaller and the step rates fewer. In many companies the minimum salary for the lowest level of the classification is established first, and the remainder of the salaries are built up from that figure. Take the office-boy grade as an example. The range will be narrow, and there will be at most two steps in it, because no one remains in this grade more than one year. Salaries will overlap from grade to grade; that is, the minimum salary of the next higher grade will never be either the same as or a step higher than the maximum of the preceding group. Sometimes two grades will overlap almost completely, but in these cases when promotion from one grade to the next takes place, the clerk receives the next higher step rate, and not the minimum rate in the new classification.

The salary limits as set for each grade must be checked with the market rates for positions falling within the grade to make sure of fairness to both the individual and the company. As a further check the salaries paid in the company for the grade should be charted to ensure that the limits embrace most of the cases. It is possible to check salaries with other companies using approximately the same classification, but this is usually not significant, because salaries depend to some extent upon location. It can only be done by calculating for each grade its percentage over the minimum salary for the lowest grade. After the salary limits have been established for each grade they must be submitted first to the department heads and then to the executive officers for their approval.

<sup>3</sup> Adapted from Goldsmith, Dorothy B., *op. cit.*

### Adjustments between present and proposed rates.

The framework of salary administration has now been erected, but the skeleton has to be clothed and the system has to be applied. The first step will be to make up a chart by classifications of salaries now being paid in the company. At each level the newly established minimum and maximum figures are indicated. A considerable number of cases appear below the minimum, and a like number above the maximum. This is to be expected because of the large proportion of employees of less than two years' service and the equally large proportion of more than ten years' service. Those cases below the minimum are the easier to handle. They should, upon the installation of the plan, be brought up to the minimum for their grade. This must be done whether or not it means a large increase. If an employee is capable of holding a job in a certain grade, he deserves the minimum salary for that grade. The cases above the maximum present a more difficult problem. Whenever possible the employee should be promoted to the next grade. If no positions are open and the employee is capable of promotion to the higher grade, he may be told that he is beyond the maximum and therefore can have no further increase in that grade, that no openings are available in the next grade at the moment, but that he will be in line for the next vacancy that occurs.

The most difficult case of all is that in which the employee is doing his present job fairly satisfactorily, but is incapable of the work of a higher grade. Because of length of service his salary is beyond the limit of the grade. There can be no further increases if the plan is to function satisfactorily. On the other hand, there should be no cut in salary. In fairness to the employee, he should be interviewed and the situation explained. He can be assured of the continuance of his job at his present rate of pay as long as his performance is satisfactory, but it must be made clear to him that further advance is blocked. He will then be free to seek employment elsewhere if he feels he can better himself.

In companies which have adopted salary standardization the feeling is sometimes expressed that new clerks are hired at higher salaries than those experienced and giving performance on the job. To check on this for each grade of the classification, a salary chart by length of service should be prepared. Those employees who are receiving exceptionally low or exceptionally high salaries for their periods of service should be picked out



and investigated individually. Where the salary is too low and performance on the job is satisfactory, an immediate increase is advisable. Where the salary seems unreasonably high for the period of service, the case should be passed over in the next salary adjustment period. These cases are almost entirely due to a starting salary which is at too high a rate.

### Publication of salary classifications.

Inasmuch as the personnel has previously been informed of what was being planned, the next step logically is to tell them what has been accomplished. Frankness on salary matters within reasonable limits of course is desirable. If the management feels that it has a fair and equitable system of salary administration, why should it not share that knowledge with its personnel? The classification should be made public, together with the minimum and maximum figures for each grade. Each employee is entitled to know in which grade he has been placed. If his salary brings him near the maximum of that grade, the knowledge acts as an incentive to him to prepare himself for promotion to a higher grade. Lines of promotion must be clear and available to each employee. While each individual should be given as much information as possible about his own position and his own possibilities, it is not wise to encourage curiosity about the specific grading and specific salary of other clerks. The complete list of jobs under each grade should not be made public but merely the definition of the grade, its salary limits, and the individual's own position in relation thereto. It may be mentioned in passing that in fitting the clerk for the next higher grade, a periodic interview with each employee is most advisable. Through this interview his interests and ambitions are ascertained and encouraged, and he can be given information and advice to aid him.

Salary limits automatically set salaries for new clerks coming into the company. They will be hired at the minimum salary for the grade in which they are placed. When clerks are promoted they will be given the minimum salary of the higher grade, or if it is an overlapping grade, the next step rate beyond their present one. This point should be emphasized. There is no reason for deferring the increase until the clerk has made good. The benefit of the promotion in improving morale and fostering loyalty to the company will be lost. The employee has earned the promotion. He has therefore earned the increased salary

which goes with it. It is reasonable to assume that he will succeed in the new position—otherwise he would not have been picked for it. It should be understood, however, that if he does not make good on the job his salary will drop back to its old level. This knowledge acts automatically as a further incentive to do the new job well.

### Periodic review of job analyses.

To keep jobs properly classified it is necessary to review the job analysis of each position periodically. It should, of course, be reviewed upon the request of the department head at any time. When new jobs are created, careful job specifications are made out, and with the approval of the department head, the position is assigned to its place in the classification. In reviewing any job analysis it is essential to do so without consideration of the incumbent of the position, especially if that incumbent is at the maximum salary limit of his group.

There should also be machinery for checking on salary limits for each classification. The checks previously suggested, namely salaries in the open market and salary schedules of companies with a similar set-up, can be utilized for this purpose. In addition, it is wise to review annually cost of living figures for the community, and if these have shown a considerable and sustained increase or decrease, the necessary adjustments should be made.

While it is not a panacea for all ills and while its success is dependent in the last analysis upon careful and intelligent supervision, proper salary administration is a step forward in bringing order into a field long controlled by individual bargaining, with its attendant ills, and in helping the employee to receive the return which he has earned, and the company the service to which it is entitled.

**Incentive compensation versus straight salary.** Ever since Mr. F. W. Taylor pointed out the desirability of accurately measuring the quality and quantity of production of every employee and compensating him either wholly or in part on a measured production basis, it has been the practice of an increasingly large number of manufacturing organizations to pay their factory workers on some sort of incentive wage plan. That the adoption of such meth-

ods has been of untold advantage to both the employer and the employee needs no reiteration here.

Prior to about 1925 only scattered attempts were made to apply the principles of incentive compensation to offices, owing primarily to the assumption—which has since proved to be quite without foundation—that both office work and office workers were somehow “different.” It is true, to be sure, that in many offices, particularly those of small or moderate size, the same employee does many different kinds of work. It does not follow, however, that it is impracticable to install incentive compensation methods in other situations where the work is more specialized and can readily be measured. During the last ten years, more and more concerns have found it both practical and desirable to adopt some types of extra incentive or bonus plan in compensating their office workers. The results in almost every case have been increased earnings for the employees and a decreased cost to the company per unit of work performed.

**How to establish clerical standardization.** Although several rather complicated and quite scientific methods have been used in various offices, a simpler approach to the work of standardizing clerical activities, which must precede the installation of a premium or piece-rate compensation plan such as is outlined below, is often used. It will be noticed that this method includes the making of what is essentially a job analysis of office positions.

The steps to be taken are outlined below.

1. The first step toward standardization is to have the clerk make a record of all his work for several days. The clerk should record the kind of work done, the time started, the time completed, and every operation. It is very important to caution the clerk to record all interruptions and to make the record as detailed as possible. If the clerk at any time has no work or spends time on personal needs, he should mark this as “idle time.”

2. The office manager should look over these records

very carefully to get a general idea of the clerk's work. Some of the points to be looked for are: Is the clerk doing only such work as he should? Is he interrupted very often? Does all the work flow to him in a regular manner or does the work come to him spasmodically?

3. The next thing for the office manager to do is to separate the standard operations that are expected to appear from day to day from the other, miscellaneous operations. He should then consider each of the standard operations to determine the units. In standardizing order writing, for instance, it may be best to consider the entire order as a unit, or, if the number of items per order varies a great deal, it may be fairer to use the number of items per order as a unit.

4. After the unit has been determined, the office manager should outline each operation, and describe exactly what the operation consists of and what the unit is. This is then given to the clerk and explained to him carefully. All unstandardized or miscellaneous work should be placed in the "Miscellaneous" column, with an explanation of the work in the "Detail" column.

5. At the end of the week the office manager should figure the total minutes, the units, and the units per minute for each operation as shown on the clerical production time sheet. From his own experience and from the experience of his department head, he should consider whether this unit per minute is about what an average clerk should produce. Whenever the figure seems extremely high or extremely low, an immediate investigation should be started with a view to determining what is wrong, so that the faults may be corrected.

6. After the office manager is satisfied that all faults regarding the operations of the clerk have been corrected and that the clerk is working at a fair average speed, he should then consider this average speed figure in units per hundred as standard time. In determining this unit or standard

time the office manager should allow about 6 or 8 per cent for idle time or recreation. Whenever possible, the clerk should have standardized work only. If there are several in a department, perhaps one clerk will do all unstandardized operations.

7. If the office manager wishes to establish a premium or bonus system, there are various methods of doing this: He can establish a rate per piece or per unit, thus placing the standardized work on a straight piecework basis. He can use the unit as a method of raising a clerk's pay, or of establishing different rates of pay according to the output. Or, he can compute the difference between the standard time and allow a bonus for this saving of time. For example, a girl may be guaranteed a salary of \$18 per week. During the week she works 2000 minutes on work for which the standard time is 2400 minutes. The girl saves 400 minutes, and therefore is paid a bonus based on a certain amount per minute saved.

**Specific examples of incentive compensation methods.** The following cases illustrate a number of specific applications of incentive compensation methods.

**Bookkeeping-machine operation.** For an average of 350 postings a day the bookkeeping-machine operator receives a bonus of \$7 per month in addition to her regular salary; for each 50 postings over 350 she receives \$3.50 extra. A penalty of 25 cents per error is charged the operators when they are directly responsible for the error. The operators average from \$17 to \$24 extra per month.

**Dictaphone operation.** A bonus is paid based on the total number of square inches of typed material produced by the group. The bonus is calculated as follows:

$$\frac{\text{Total output} - (4100 \times \text{No. of Operators})}{4100 \times \text{No. of Operators}} = \%$$

$$\frac{\% \times \text{Total wages of Operators in department}}{\text{No. of Operators} \times 2} \quad \text{Dollars of bonus per Operator}$$

*Example:*

$$\begin{array}{rcl}
 \text{(Total output)} & \text{(4100} \times \text{ five Operators)} & \\
 28,000 & - & 20,500 \\
 & & \text{(Total wages)} \\
 & & \$90.00 \times .36 \\
 \hline
 7,500 & & \\
 \hline
 20,500 & = 36\% & \\
 \end{array}
 \qquad
 \begin{array}{rcl}
 & & 5 \times 2 \\
 & & \hline
 & & = \$3.24 \text{ (Bonus)}
 \end{array}$$

Operators who are absent lose their share of the bonus for the week of absence.

**Invoice writing.** Fifteen hundred impressions constitute a standard number for one week's work. The total number of impressions made is counted by the use of a cyclometer attached to each typewriter. A bonus of  $4\frac{1}{2}$  cents per 100 impressions over 15,000 a week is paid, with one and one half cents deducted for each error.

*Example:* Payment to be made to Miss Blank.

Cyclometer reading at the beginning of the week .....	40,000
Cyclometer reading at the end of the week .....	64,000
Net cyclometer impressions made during the week ....	24,000
Less standard production .....	15,000
Balance for which bonus is paid .....	9,000
Gross bonus at $4\frac{1}{2}$ cents per 100 .....	\$4.05
Less six errors at $1\frac{1}{2}$ cents each .....	.09
Net bonus .....	<u>\$3.96</u>

**Punching tabulating cards.** Operations are divided into three classes, depending on the difficulty of the reports involved, and a bonus rate is established for production above the standard in each class. This bonus rate increases from 1 cent to 24 cents per hour. Bonuses are paid every four weeks on the regular pay day, and are based on records for the entire period, great value being attached to sustained output for a month. Five per cent of the bonus earned for the entire bonus period of four weeks is deducted for each day's absence.

Where errors occur, a deduction of five cards for each error is made from the class in which the error occurs, before figuring the bonus. This applies to cards incorrectly punched and detected after leaving the operator's desk.

**Methods and experience of a large clerical organization.**

*Transcribing cylinders.* For transcribing cylinders the company has established a standard task of 2000 points per week and a rate of \$1.25 per 100 points net. When a new operator is put on the pay roll she is given \$25 per week minimum guaranty for four weeks. If she produces in excess of 2000 points net, she is given all she earns. If less, she receives her \$25 per week. At the end of four weeks, the guaranty is withdrawn and she is paid at the rate of \$1.25 per 100 points for her net production up to 3000 points per week. When 3000 points net per week ("the point of participation") has been reached, the rate is automatically reduced to 75 cents per 100 points.

Figures for other operations are summarized below.

*Typing, including cards, listing, straight copy work, form letters, and addressing envelopes.* Rate, 90 cents per 100 cyclometer points net. Four weeks' guaranty, \$17. Standard task, 1900 points net. Point of participation, 2700 points net. Rate for excess production, 60 cents per 100 points.

*Addressing envelopes.* For addressing envelopes from letters written by transcribers, the rate is \$1.25 per 100 cyclometer points net. Four weeks' guaranty, \$17. Standard task, 1360 points net. Point of participation, 1900 points net. Rate for excess production, 75 cents per 100 points net.

*Speed-o-feeder.* Speed-o-feeder addressing envelopes from cards or lists. Rate, 22 cents per 199 envelopes. Point of participation, 11,000 envelopes net. Rate for excess production, 15 cents per 100 envelopes.

*Penalty for errors.* The penalty for errors is 5 per cent of the daily production per 100 typographical errors and for each letter which, due to the operator's carelessness, must be rewritten.

**Results obtained.** The two most frequently voiced objections to compensation on a measured production basis are the tendency of the management to cut rates and the tendency of the workers to indulge in harmful speeding. This company believes it has eliminated these two difficulties by establishing for each operation a "point of participation." This point represents a good, steady, day-in-

day-out production for a fast worker. Workers are given the regular rate calculated weekly until this point is reached. After passing the point of participation they are paid roughly 60 per cent of the standard rate. The company is interested in keeping its workers. It does not want them to injure themselves through over-exertion or nervous strain. For these reasons a part of the incentive is removed when the point which is regarded as a fast week's work is reached.

Under this plan the transcribers' production increased 27 per cent. Cost decreased 16 per cent. All the workers earned more than their former salaries. Typing cost decreased 28 per cent. Some of the typists more than doubled their production. Approximately 15 per cent of the workers regularly exceed the point of participation. Some of the transcribers earn as high as \$40 per week regularly. The average is \$32. Previously they were being paid from \$25 to \$27.50. Several typists, who were earning \$17 and \$18 under the old system, have earned as high as \$30 per week under the new system. The average is \$22.

A questionnaire to which no signature was required indicated that 85 per cent of the workers were in favor of the plan. The remaining 15 per cent were not hostile, but would be as well satisfied with straight salary work. None reported any feeling of strain.

**Other forms of extra compensation.** In many offices, particularly in those where the nature of the work is such that measured production methods of compensation are not practical, other plans of extra compensation are in force. For example, one well-known company has in operation among its branch offices what is known as a "gain-sharing system." Under this system each branch of the company works out a per dollar cost of doing business for its territory. These costs are a total of what it considers average good management can produce. To these costs,  $2\frac{1}{2}$  per cent is arbitrarily added, and any savings under these total costs are divided equally between the company and the branch



office, if the amount does not exceed 25 per cent of the total salaries, or 25 per cent of the individual salaries. This gain is distributed among the office or clerical employees in the branch, more or less according to salaries, but more particularly to the individual employees producing the best results. Gains in excess of 25 per cent, or losses, are carried forward, and, if not absorbed, are dropped on a six-months' cycle.

Annual bonuses are also in wide use among business concerns, particularly in banks and financial institutions. Such bonuses are usually based either on length of service or salary, or on a combination of these factors.

**Conclusions regarding incentives.** Whatever one may think about the theoretical desirability of paying a bonus to get something done which employees should be expected to do without additional reward, the fact is that everyone, from executives to the lowest-paid employee in the organization, responds to the spur of an incentive. In dollars and cents the amount of the bonus may not seem at first thought to be worth the effort. Yet when it is considered in the light of the proportion that it bears to the total earnings of the employee in question, the reason for its good effect becomes more apparent. Thus, an opportunity to earn \$1.50 extra a week may not seem of much consequence to the department head whose salary is \$5000 a year. To the employee receiving \$30 a week, however, such a bonus is equal to 5 per cent of her salary. An opportunity offered to the department head to increase his income 5 per cent would certainly be regarded favorably, and the same psychological laws that govern his reaction motivate the feelings of the rank-and-file worker.

## CHAPTER XXV

### *Supervision of Office Employees*

In the preceding chapters the principles, methods, procedures, and techniques with which the practical office manager should be familiar have been discussed in some detail. A knowledge of all of these matters is essential to success in office-management work. Yet a person who has only a knowledge of office system, routine, and operations, no matter how complete it may be, can never successfully fill the position of office manager. The manager also must be an executive. Every office executive has the two-fold job of getting out the work and handling human relations.

The average person craves leadership. Most people want a leader to follow. All humanity is made up of leaders and followers. The followers are legion, but good leaders are scarce. The person with ability to lead has no difficulty in finding willing followers. But people will not willingly fall in line behind a superior who does not lead.

Unfortunately, space limitations make it impossible to present a full discussion of the principles and technique of supervision here, despite its obvious practical importance. This chapter, therefore, is confined to a brief discussion of the essentials of leadership, together with a statement of the qualifications necessary to successful supervision of the work of others.

**What supervision involves.** Literally, supervision means looking over or overseeing, and its object is to get the work done on scheduled time and as economically as possible. Simple as this may sound, it is in itself a large order—larger in fact than the average office supervisor is able to handle

satisfactorily. A brief examination of some of the more important factors involved in supervision will make the reasons for this statement clear.

Supervision involves, first of all, a knowledge of the extent and limits of the authority and responsibility inherent in the position or granted to the individual who is to supervise. The necessity for clearly defining authority and responsibility has been stressed so frequently in previous chapters that it is almost trite to repeat it here. Yet nowhere is it more important that authority and responsibility be clearly defined than in the field of office management. Unfortunately, the office manager himself sometimes suffers because of the lack of a clear definition of his own work. He may be held responsible, for example, for the general cleanliness of the office, yet the contractor whose employees do all such work may feel that his primary responsibility is to the purchasing agent who signed the original contract or to the treasurer who pays him each month.

No matter what his own position and problems in this respect may be, however, the office manager should be sure that he does not impose similar burdens on his subordinates. If, for example, the nature of the business is such that skeleton staffs of the various office service sections, such as the central stenographic, the duplicating, the mail-and-messenger, and the elevator service, must be maintained after hours, either regularly or periodically, the office manager should delegate to one person the responsibility for all such activities. To allow each section to function independently under such circumstances is to invite internal disagreement, with consequent jeopardy to the work. The first essential of leadership, therefore, is the ability to assign authority and responsibility clearly and definitely.

Second, proper supervision involves a thorough knowledge on the part of the supervisor of the work to be done. Again, this point may seem trite and elementary, yet in practice it is by no means always observed. While the

highest management executives naturally do not expect the department heads to be familiar with every detail of every activity carried on in their departments, they have every right to expect them to know quite specifically what is going on.

As an important department head, the office manager should make it his business to keep closely in touch with all the activities of his department, so that when he is asked, perhaps quite unexpectedly, what the company's practice is in a given matter or why a certain thing is done in a particular way, he can answer without hesitation. An executive or supervisor who must rely on an assistant to supply the salient facts about a matter over which he has control soon loses the respect of his superiors and of his subordinates.

While other qualities are essential, of course, a thorough knowledge of the work is an all-important point to be borne in mind in the selection of a supervisor. It is highly desirable, for example, that the person in charge of a centralized stenographic transcription department be an experienced stenographer or operator herself. The office manager should make it his business to check up periodically on the details of the work for which each supervisor is responsible, in order to see that each one is fully familiar with what is going on in his own section.

Third, good supervision involves an appreciation of the relative importance of current and pending work. An industrial engineer once said that all business operations consist of two kinds of details, symptomatic and routine. The intelligent and experienced executive knows almost instinctively into which class any given matter falls; if supervisors do not know, it is one of the prime duties of the office manager to teach them as quickly as possible. A good sense of proportion is as important in business—and in life—as, for instance, a good sense of humor.

Specific cases with which both the office manager and the supervisor are familiar, and which are taken directly from

incidents in the day's business, provide the best object lessons, if any are needed. For example, a supervisor may report to the office manager her inability to complete certain work on time. Two essential questions should be settled at once: first, the importance of the uncompleted work and second, the cause of the delay. If time is not an especially important factor, or if the delay was caused by the unexpected and temporary absence of an employee, the matter may be regarded as routine. If, on the other hand, the work must be finished by a given hour or if the department is constantly behind schedule, and if this situation is merely one of a number of similar cases that have occurred recently, then the matter obviously is one that requires immediate attention and thorough investigation. More than one office manager has suffered a serious loss in standing in the eyes of his superiors because he has neglected to make sure that his immediate subordinates had the proper appreciation of the relative importance of current and pending work.

Fourth, supervision involves the ability to get along well with others—including superiors and subordinates. One of the practical problems involved here is to strike the proper balance between being too strict and being too lenient. Good discipline is essential, of course, in any organization. The strict disciplinarian, however, is more likely to receive obedience rather than coöperation. The lenient supervisor, on the other hand, often does not have the real respect of his subordinates. The best supervisors—and executives—are those who have the confidence, coöperation, and respect of their superiors, associates, and subordinates.

An essential quality for getting along well with others is the ability—and willingness—to see both sides of a situation. All too often supervisors thoughtlessly disregard the responsibilities, feelings, or ideas of others, and then wonder why they do not seem to get along well with them. The supervisor may know at eleven o'clock in the morning, for example, that rush work is coming through that will

make it necessary for certain employees to work overtime that evening. However, instead of letting her subordinates know promptly—before lunch perhaps—she says nothing until four or half past in the afternoon, when she lets it be known that certain employees must stay overtime. Naturally they resent such late notice, and if the practice becomes a habit, they may begin to make excuses for not staying, thus embarrassing the supervisor and her superior as well.

Fifth, the supervisor must be able to teach others. Reference was made in a previous chapter to the fact that training office employees necessitates not only a thorough knowledge of the work, but also the ability to impart that knowledge to others. Patience is also essential to success in all such work.

One common fault, which the office manager constantly must guard against, is the tendency of supervisors to assume that employees understand just what to do after some procedure has been explained to them, once, or twice at the most. While constant reiteration should not be necessary, the average mind can absorb and hold only a relatively few simple instructions given at one time. Thus for the supervisor to spend the first half-day with a new clerk going over the work, to make a brief check-back a day or two later, and then to assume that the clerk is trained—or that at least she certainly should be—is to expect the impossible. Whenever the office manager has reason to believe that this is being done, quite unintentionally, perhaps, he should query the supervisor carefully as to exactly what steps are being taken to train new employees, emphasizing the fact that successful training is a relatively slow process which necessitates going back over the same ground a number of times.

Last, the supervisor should fairly represent—not misrepresent—the viewpoint of the management. Some supervisors are prone to lay the blame on “the management” when an unwelcome order must be given or a penalty im-

posed. While it is of course true that the management must accept the final responsibility for all decisions, it is manifestly unfair to lay the blame at its door for something for which it is not responsible. A supervisor, for example, may have neglected to have certain work completed when it was due, solely because of inertia or procrastination. Realizing the vulnerability of her own position, she blames "the management" for demanding that the work be gotten out immediately.

The office manager himself must be especially careful to represent fairly the viewpoint of the management. In most cases the office manager is the contact point between the executive officers on the one hand and the supervisors and employees on the other. He is frequently informed of management decisions having to do with policy and then given the responsibility of interpreting them to those affected. In such cases, of course, he must be sure, not only that he fully understands the executive viewpoint and the reasons for it, but also that he interprets it fairly to others. There is, perhaps, no one person in the organization who has a greater opportunity to reflect the viewpoint of the management correctly and fairly to the employees than the office manager.

Ten things that an office worker expects of a supervisor. In his book *Practical Office Supervision*<sup>1</sup> Mr. Glenn Gardiner outlines, in question form, ten ways in which a supervisor is obligated to the office workers under him:

1. *Respect.* Do I enjoy the respect of each individual under me? Have I done any specific thing—by act or word—to demonstrate conclusively to each person that I respect him or her?

2. *Open-mindedness.* Am I glad to have subordinates come to me with their suggestions? Am I ever stubborn about accepting a viewpoint of any of my subordinates? Do I listen patiently, and without annoyance, when a subordinate presents an idea with which I disagree?

3. *Understanding.* Does each person understand fully how

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<sup>1</sup> Gardiner, Glenn L., *Practical Office Supervision*. McGraw-Hill Book Company, Inc., New York, 1929.

I feel about him? Does each person know what I expect him to do in order to win advancement? Have I sat down with each person and had a full and frank talk with him about himself, his work, and myself? Do I do this at least twice a year?

4. *Approachability*. Do subordinates approach me timidly? Do I consciously try to make it easy for my subordinates to take up personal matters with me? When a subordinate approaches me with something on his mind, do I keep him standing waiting until I finish the task immediately at my hand, or do I give him my attention at once? Do I ever avoid the approach of a subordinate by putting on a busy air?

5. *Self-control*. Do I indulge in arguments with subordinates? Do I ever let my personal grouches affect my manner of dealing with my people? Can I control myself under trying and irritable circumstances? Do I ever lose my temper?

6. *Promises*. Do I ever make promises, the fulfillment of which is dependent upon the approval or act of someone above me? Do I ever make a promise with the intention of finding some logical way out of it before the time to keep it arrives? Do I ever have to be reminded by my subordinates of promises I have made to them?

7. *Patience*. Do I become irritable when subordinates do not live up to the letter of my expectations? Am I willing to repeat instructions to subordinates who are slow to grasp new ideas? Am I greatly annoyed by minor mistakes?

8. *Fairness*. Do I allow personal likes or dislikes to alter my treatment of individuals? Do I have any special arrangements or dealings with individuals that I could not explain logically and satisfactorily to others under my supervision? Am I honest and impartial under all circumstances?

9. *Reasonableness*. Do I ask my subordinates to do things I would not care to do myself? Do I assign tasks I have never actually done myself? Do I give careful consideration to the amount of work I can reasonably expect a subordinate to turn out? Do I require greater speed and accuracy of workers than is absolutely necessary? Do I require anyone to put in more overtime than I do myself?

10. *Loyalty*. Do I put my personal interests ahead of the interests of my workers? Do I accept full responsibility for the mistakes of my department, or do I lay the blame on individuals under me? Am I as sincerely loyal to my subordinates as I want them to be to me?

These are searching questions which merit the thought-



ful consideration of every person who occupies a supervisory position in an office, whether he be the head messenger or the office manager himself. Collectively, they center attention on the essential point of this chapter, namely, that the guiding principle to the successful supervision of office workers is leadership rather than autocracy.

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